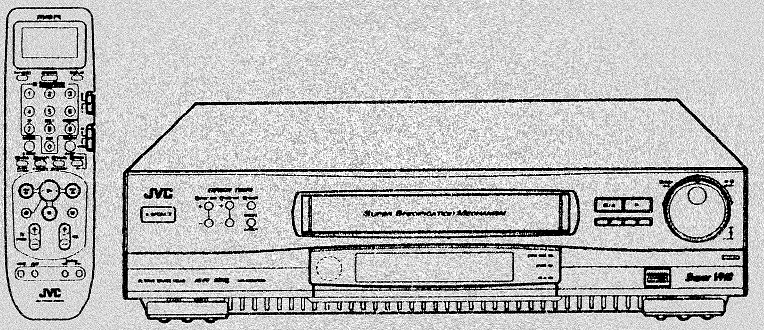
JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S5900EG/S6900EG



SHOWVIEW

premiere

Hi-Fi S-VHS 625

SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-S5900EG)*

GENERAL

Power requirement : AC 220 – 240 V∿, 50/60 Hz
Power consumption : 34 W
Temperature
Operating : 5°C to 40°C
Storage : –20°C to 60°C
Dimensions (WxHxD) : 435 x 109 x 387 mm
Weight : 6.1 kg
Format : S-VHS/VHS PAL standard
Maximum recording time (SP) : 240 min. with E-240 video cassette
(LP) : 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR monochrome signal, 625 lines/50 fields
Recording system : Rotary two-head helical scan system with slant double-azimuth combination video heads
Signal-to-noise ratio : 43 dB (Rohde & Schwarz noise meter)
Horizontal resolution : 250 lines (VHS)
400 lines (S-VHS)
Frequency range : 70 Hz to 10,000 Hz (Normal audio)
20 Hz to 20,000 Hz (Hi-Fi audio)

Input/Output : 21-pin scart connector (IN/OUT x 1, IN/DECODER x 1)
: RCA connectors (AUDIO IN x 1, AUDIO OUT x 1)
: S connector (IN x 1, OUT x 1)

TUNER/TIMER

Channel coverage : VHF 47 – 89/104 – 300/ 302 – 470 MHz
UHF 470 – 862 MHz
Aerial output : UHF channel 36 (Adjustable 32 – 40)
Memory backup time : 60 min.

ACCESSORIES

Provided accessories : Aerial cable,
Infrared remote control unit,
"R6" battery x 2,
AC power cord
Audio cable
S-Video cable
Optional accessory : VPT adapter VU-V142E

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.

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No. 82392
March 1994

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The following table lists the differing points between Models (HR-S5900EG and HR-S6900EG) in this series.

	HR-S5900EG	HR-S6900EG
SIDE PANEL	×	○
FRONT INPUT	×	○

○: USED × : USED

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

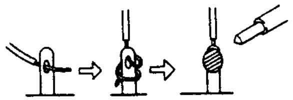


Fig. 1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

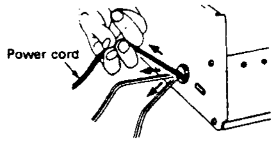


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

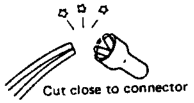


Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

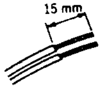


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

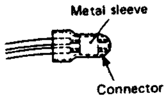


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

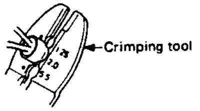


Fig. 6

(5) Check the four points noted in Fig. 7.

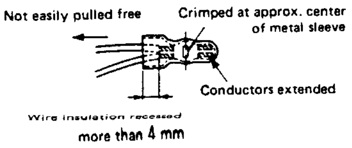

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig. 7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

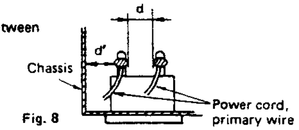


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method: (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

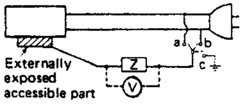


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

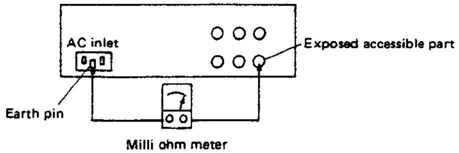


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	–	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ /500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

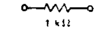
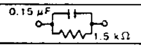
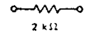
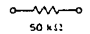
AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	 1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	 0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	 2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		 50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Safety Precautions

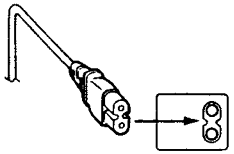
The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

The OPERATE button does not completely shut off mains power from the unit, but switches operating current on and off.

This unit is produced to comply with Directives 76/889/EEC, 82/499/EEC, 87/308/EEC and Standard IEC Publ. 65.

CAUTION



- To avoid electric shock or damage to the unit, first firmly insert the small end of the AC power cord into the recorder until it is no longer wobbly, and then plug the larger end of the AC power cord into an AC outlet.
- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.

- Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".
- ShowView is a trademark applied for by Gemstar Development Corp. ShowView system is manufactured under licence from Gemstar Development Corporation.

WARNING
There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).

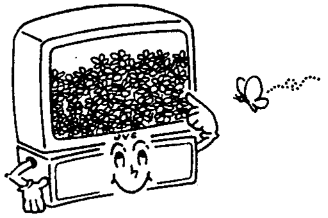
1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

IMPORTANT:

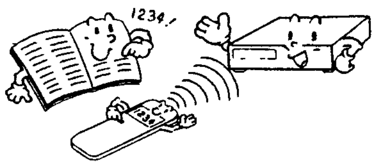
- It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.
- Please read the "Precautions" section of this instruction manual before installing or operating the recorder.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

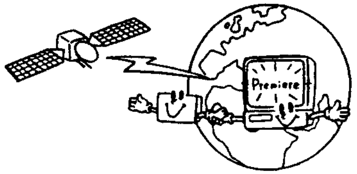
Features



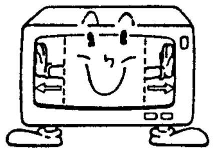
High Resolution with Super VHS
Super VHS (S-VHS) high-resolution picture is ideal for viewing on large-screen TVs, and remains beautiful even after editing.



ShowView LCD Remote Control
All the convenience of ShowView timer programming. Simply look through a TV listing, key-in the ShowView number of the TV show you want, and push a button to transfer it to the recorder!



Premiere Decoder Compatible
Can subscribe to Premiere and receive satellite broadcasts via a connected Premiere decoder.



Auto 16:9
Recording/playback of wide aspect ratio programmes with automatic detection. Puts you in touch with the latest in broadcast entertainment.

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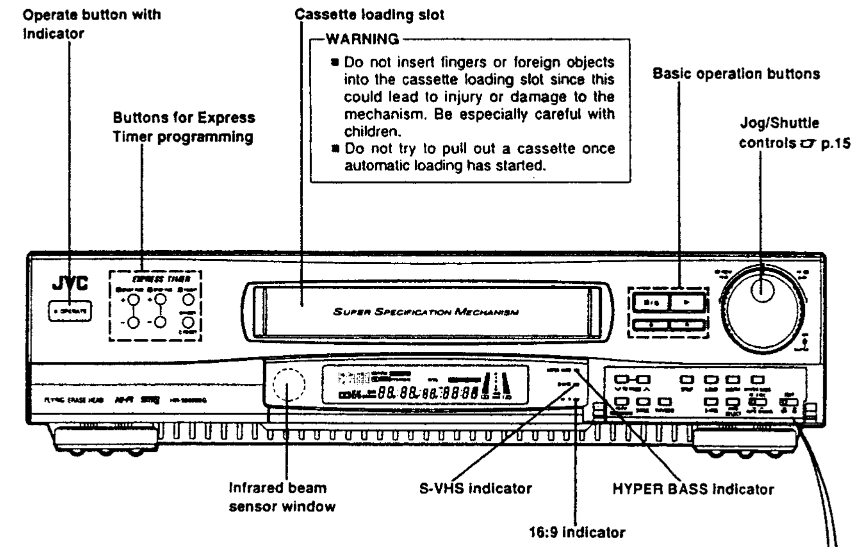
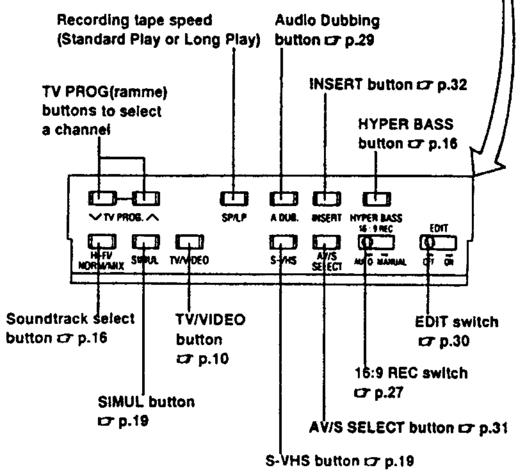
Controls And Indicators

Front Panel

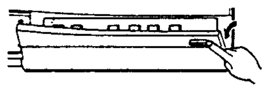

Operate button with Indicator
Buttons for Express Timer programming
Cassette loading slot
Basic operation buttons
Jog/Shuttle controls ☞ p.15
JVC
SUPER SPECIFICATION MECHANISM
Infrared beam sensor window
S-VHS indicator
HYPER BASS indicator
16:9 indicator

WARNING

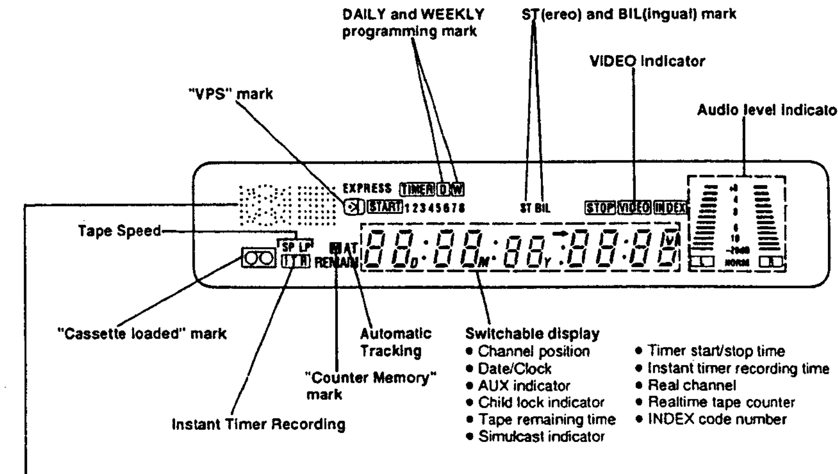
- Do not insert fingers or foreign objects into the cassette loading slot since this could lead to injury or damage to the mechanism. Be especially careful with children.
- Do not try to pull out a cassette once automatic loading has started.


Recording tape speed (Standard Play or Long Play)
Audio Dubbing button ☞ p.29
TV PROG(ramme) buttons to select a channel
INSERT button ☞ p.32
HYPER BASS button ☞ p.16
∨ TV PROG. ∧
SP/LP
A.DUB.
INSERT
HYPER BASS
16:9 REC
EDIT
HI-FI/V NORM/AUX
SIMUL
TV/VIDEO
S-VHS
AV/S SELECT
AUTO MANUAL
OFF ON
Soundtrack select button ☞ p.16
TV/VIDEO button ☞ p.10
EDIT switch ☞ p.30
16:9 REC switch ☞ p.27
SIMUL button ☞ p.19
AV/S SELECT button ☞ p.31
S-VHS button ☞ p.19

Open lid to access covered connectors and buttons.



Display Panel

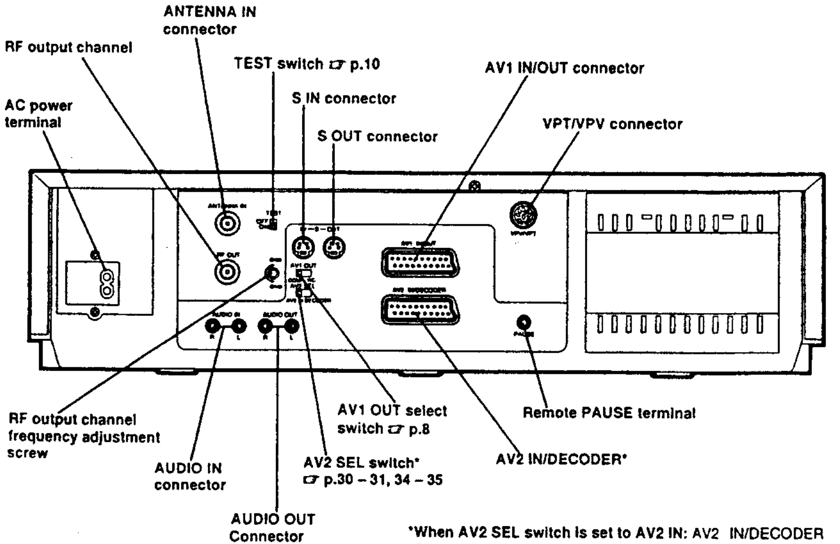

"VPS" mark
DAILY and WEEKLY programming mark
ST(ereo) and BIL(ingual) mark
VIDEO indicator
Audio level indicator
EXPRESS TIMER D W
START 12345678
ST BIL
STOP VIDEO INDEX
SP LP
AT
REMAIN
Tape Speed
"Cassette loaded" mark
Automatic Tracking
"Counter Memory" mark
Instant Timer Recording
Switchable display
• Channel position
• Date/Clock
• AUX indicator
• Child lock indicator
• Tape remaining time
• Simulcast indicator
• Timer start/stop time
• Instant timer recording time
• Real channel
• Realtime tape counter
• INDEX code number

Symbolic mode indicators

PLAY:	▷	REW VARIABLE SHUTTLE SEARCH:	◁ ◁◁	RECORD:	○	INSERT:	▷
FF:	▷▷	REVERSE PLAY:	◁	RECORD PAUSE:	○ ▯▯▯	INSERT PAUSE:	▷ ▯▯▯
REW:	◁◁	STILL: REVERSE SLOW:	◁ ▯▯	AUDIO DUBBING:	○	AUDIO DUBBING INSERT:	▷
FF VARIABLE SHUTTLE SEARCH:	▷ ▷▷	STILL: FORWARD SLOW:	▷ ▯▯	AUDIO DUBBING PAUSE:	○ ▯▯▯	AUDIO DUBBING INSERT PAUSE:	▷ ▯▯▯

Controls And Indicators (cont'd)

Rear Panel

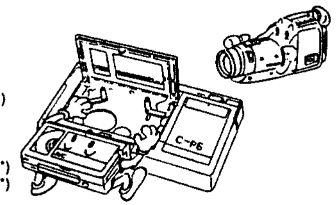

ANTENNA IN connector
RF output channel
TEST switch ☞ p.10
AV1 IN/OUT connector
AC power terminal
S IN connector
S OUT connector
VPT/VPV connector
RF output channel frequency adjustment screw
AUDIO IN connector
AV1 OUT select switch ☞ p.8
AV2 SEL switch* ☞ p.30 – 31, 34 – 35
Remote PAUSE terminal
AV2 IN/DECODER*
AUDIO OUT Connector

***When AV2 SEL switch is set to AV2 IN:** AV2 IN/DECODER Connector works as auxiliary input connector.
When AV2 SEL switch is set to DECODER: AV2 IN/DECODER Connector works as input connector for Premiere decoder.

Usable Cassettes

Full-Size VHS
E-30 (SE-30**)
E-60 (SE-60**)
E-90
E-120
E-180 (SE-180**)
E-240

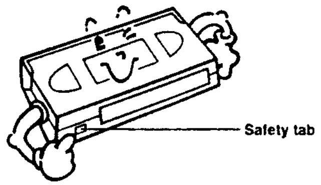
Compact VHS*
EC-30 (SE-C30**)
EC-45 (SE-C45**)



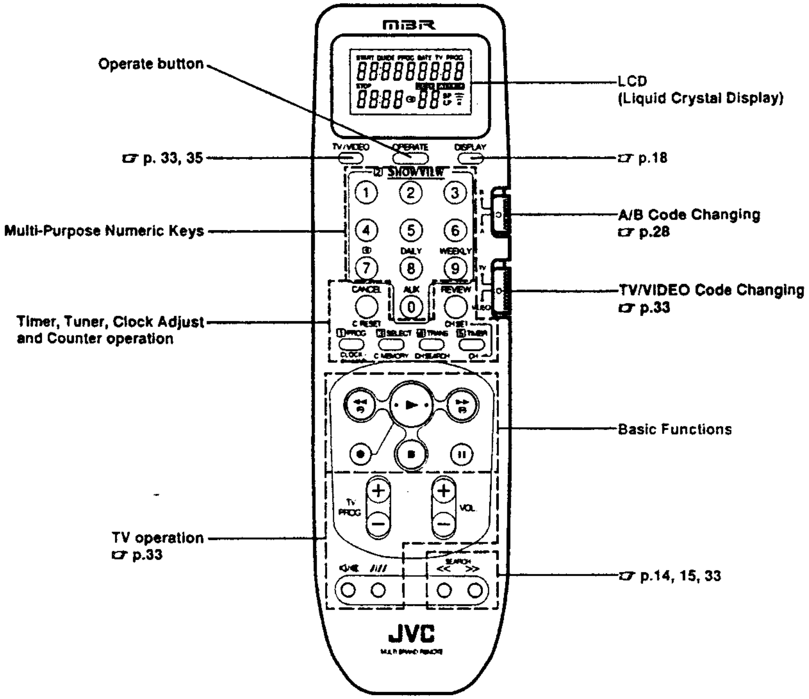
- * Compact VHS camcorder recordings (PAL) can be played on this video recorder. Simply place the recorder cassette into a C-P6 Cassette Adapter and it can be used just like any full-sized VHS cassette.
- ** This video recorder can record on regular VHS and Super VHS cassettes. While only VHS signals can be recorded on regular VHS cassettes, both VHS and Super VHS signals can be recorded and played back using Super VHS cassettes.

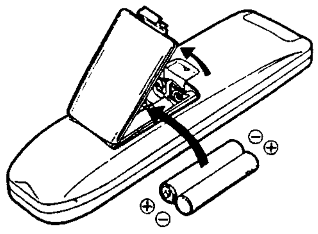
Accidental Erasure Prevention

To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.



Wireless Remote Control


Operate button
LCD (Liquid Crystal Display)
☞ p. 33, 35
☞ p.18
Multi-Purpose Numeric Keys
A/B Code Changing ☞ p.28
TV/VIDEO Code Changing ☞ p.33
Timer, Tuner, Clock Adjust and Counter operation
Basic Functions
TV operation ☞ p.33
☞ p.14, 15, 33
TV/VIDEO
OPERATE
DISPLAY
SHOWVIEW
DAILY
WEEKLY
CANCEL
AUX
REVIEW
JVC



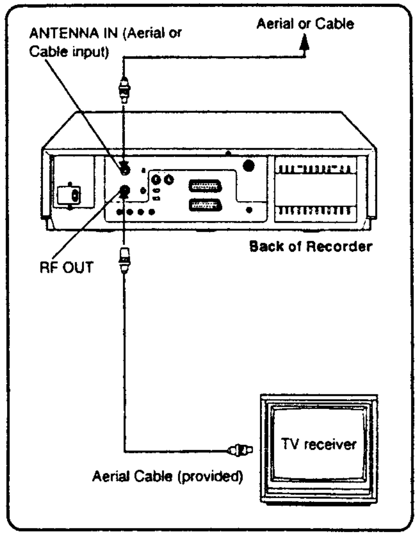
Installing Batteries

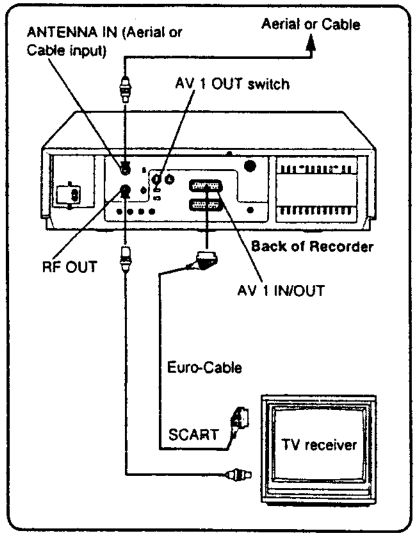
1. Open the battery compartment cover.
2. Insert 2 "R6"-size batteries (provided) in the correct directions.
3. Replace the cover.

How To Use
The remote control can operate most of your video recorder's functions, as well as basic functions of TV sets of JVC and other brands. ☞ p. 33.
- Point the remote control toward the sensor window.
- The maximum operating distance of the remote control is about 8 m.

Installation

It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.


ANTENNA IN (Aerial or Cable input)
Aerial or Cable
Back of Recorder
RF OUT
TV receiver
Aerial Cable (provided)


ANTENNA IN (Aerial or Cable input)
Aerial or Cable
AV 1 OUT switch
Back of Recorder
RF OUT
AV 1 IN/OUT
Euro-Cable
SCART
TV receiver

A RECORDER-TO-TV CONNECTION

RF CONNECTION

For TV sets without AV input terminals:

1. Connect the TV aerial cable to the recorder.
2. Connect the recorder to the TV's aerial terminal.

AV CONNECTION

For TV sets with AV input terminals:

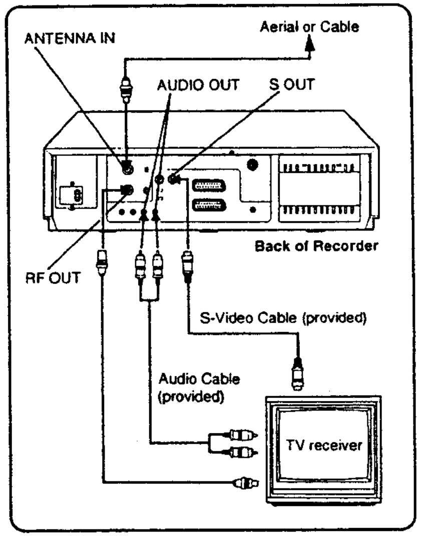
1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder to the TV's AV-IN terminals.

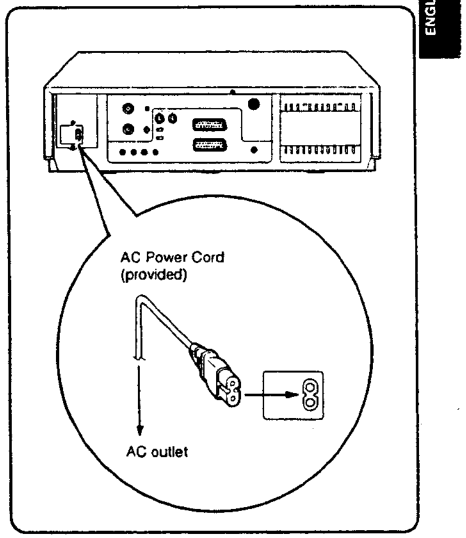
AV1 OUTPUT SIGNAL SELECTION

The AV1 IN/OUT connector accepts only a composite signal (regular video signal), but can deliver either a composite video signal or a Y/C signal (a signal in which the luminance and chrominance signals are separated) according to the setting of the rear panel AV1 OUT switch.

AV1 OUT
COMP. Y/C

- If your TV's SCART connector is compatible only with the regular video signal, set this switch to COMP.
- If your TV's SCART connector is compatible with the Y/C signal, set this switch to Y/C. You will better enjoy high-quality S-VHS pictures.
- If your TV's SCART connector is RGB-compatible, connect the KM-V7EG RGB Signal Converter (optional) between the AV1 IN/OUT connector and the TV's SCART connector, and set this switch to Y/C. The Y/C signal will be converted into an RGB signal for reproduction of high-quality S-VHS pictures.


ANTENNA IN
Aerial or Cable
AUDIO OUT
S OUT
Back of Recorder
RF OUT
S-Video Cable (provided)
Audio Cable (provided)
TV receiver


AC Power Cord (provided)
AC outlet

S-VIDEO CONNECTION

For TV sets with an S-VIDEO input terminal:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder's S OUT terminal to the TV's S-VIDEO IN terminal.
3. Connect the recorder's AUDIO OUT terminals to the TV's AUDIO IN terminals.

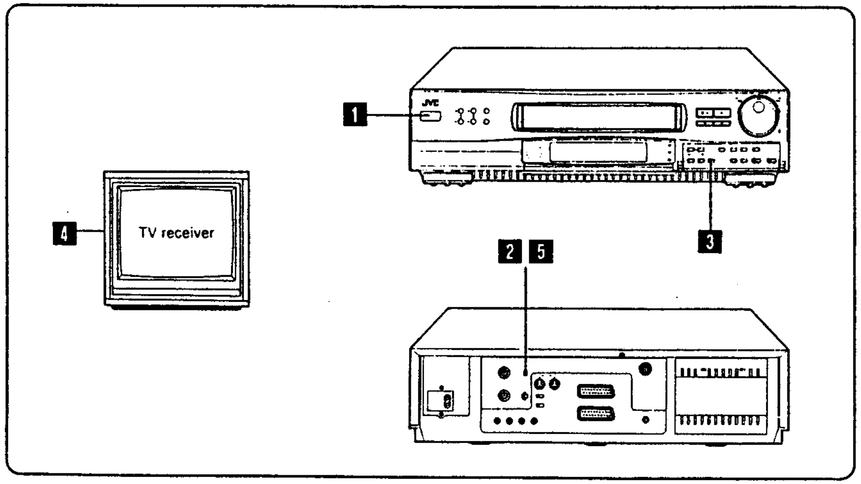
NOTES:

- To make the most of Super VHS picture performance, we recommend you use the S-VIDEO connection.
- To operate the recorder with your TV using the S-VIDEO connection, set your TV to the VIDEO (or AV mode).
- If your television is not stereo-capable, use the recorder's AUDIO OUT connectors to connect to an audio amplifier for Hi-Fi stereo sound reproduction.

B CONNECT RECORDER TO AC OUTLET

1. First, firmly insert the small end of the AC power cord into the recorder, and then plug the larger end of the AC power cord into the AC outlet.

Installation (cont'd)

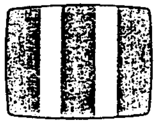


C TUNE THE TV TO YOUR VIDEO RECORDER

The video recorder sends picture and sound signals via the RF connecting cable to your TV on UHF channel 36.

TEST SIGNAL

1. Turn on the recorder.
2. Set the TEST switch to ON.
3. Press TV/VIDEO to engage the VIDEO mode.
4. Set your TV to the video channel. Tune the TV to bring the two vertical white bars on the screen most clearly. (UHF/CH 36)
   - Your TV should be set to the channel designated for use with a video recorder or to a spare channel if there is not a specified video channel on your TV.
5. Reset the TEST switch to OFF.



NOTES:

- If CH36 is occupied by a local station, adjust the RF output channel adjustment screw to use another channel between CH32 and CH40 instead.
- If some interference noise is continually seen on the screen, consult your JVC dealer.

IMPORTANT:

With RF Connection

- It is always necessary to set your TV's channel to UHF channel 36 (or adjusted channel) to operate the recorder with your TV.

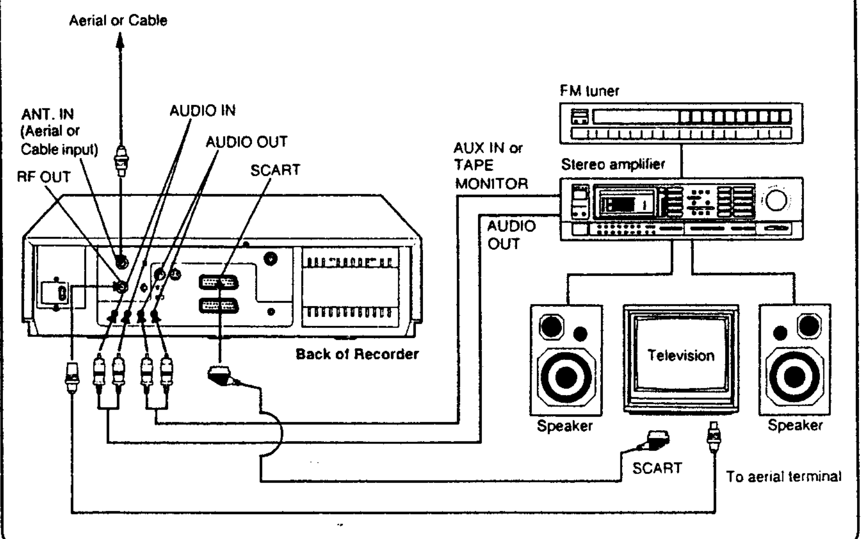
With AV Connection

- Set your TV to the VIDEO (or AV), Y/C, or RGB mode according to the type of your TV's SCART connector.
- For switching the TV's mode, refer to the instruction manual of your television.
- The TV/VIDEO button switches the recorder's mode between TV and VIDEO. When the power is turned on, the recorder's TV mode is selected. To use the recorder's function, select the VIDEO mode.
- When the TV/VIDEO button is used to change the recorder's mode to VIDEO, the connected TV's mode also switches to VIDEO automatically.

With S-VIDEO Connection

- Set your TV to the VIDEO (or AV) mode. The S-VIDEO connection has priority over AV connection.

CONNECTING TO HI-FI STEREO SYSTEM



If you have a Hi-Fi stereo system, you can connect your video recorder to it so that the sound can be heard through your Hi-Fi system. Please make these additional connections:

HI-FI AUDIO CONNECTION

1. Connect the AUDIO IN L and R connectors of the recorder to the recording output terminals of the amplifier.
2. Connect the AUDIO OUT L and R connectors of the recorder to the AUX IN or TAPE MONITOR terminals of the amplifier.

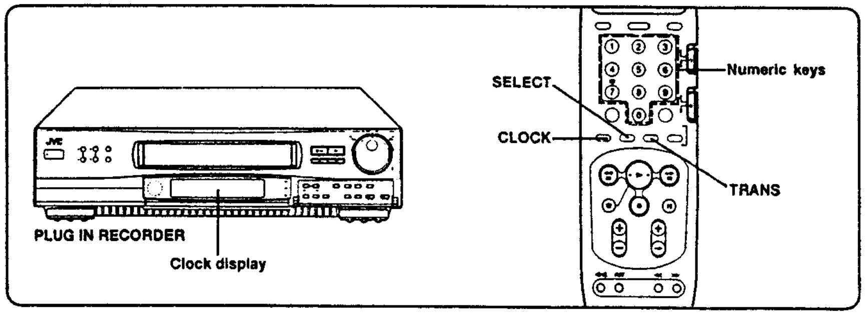
NOTES:

- Make sure L and R are correct when connecting the audio input and output connectors of the recorder to a stereo amplifier.
- If stereo or bilingual TV broadcasts are receivable in your area, this recorder can record them independently of the TV set and play them back through the connected audio system.
- When listening to sound from the connected stereo system, turn down the sound volume of the TV completely.

CAUTION:

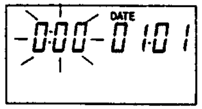
- This recorder has a dynamic range of more than 90 dB with regards to its hi-fi audio capability. It is recommended "that you check the maximum level if you are going to listen to the hi-fi audio signals through a stereo amplifier. A sudden surge in speaker input may cause speaker damage.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set, otherwise the video playback picture may be adversely affected.

Setting The Clock

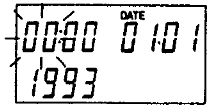


Since your video recorder bases all of its timer recording start and stop "decisions" on the time kept by its built-in clock, accurate setting of this clock is crucial for proper timer-recording results.

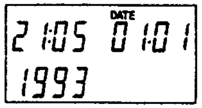
1. **Load batteries (☞ p.7).**



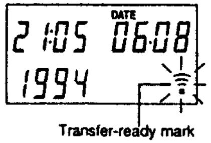
2. **Press CLOCK.**



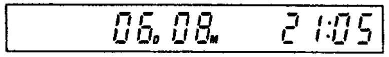
3. **Press the appropriate numeric keys to input the time.**
- Example: For 21:05, press 2 1 0 5.



4. **Press the appropriate numeric keys to input the day, month and year.**
- Example: For 6th August, 1994, press 0 6 0 8 1 9 9 4.



5. **Press TRANS with the remote control directed to the recorder's remote sensor window.**
- The remote control's clock will start. At the same time, the set data will be transferred to the recorder.



TO MAKE CORRECTIONS

Press SELECT button so that the item you want to change blinks. Re-input that item. Continue to step 5.

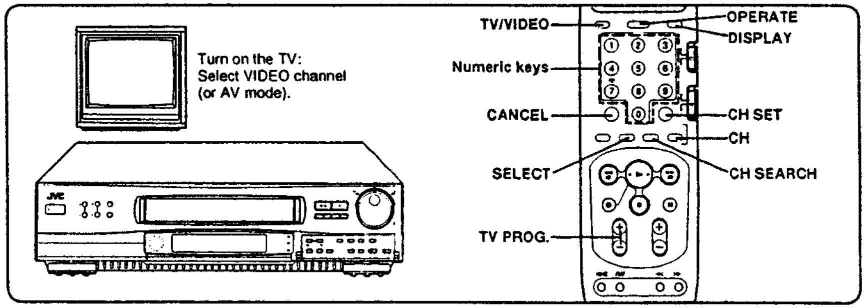
AFTER A POWER CUT

Since your video recorder has a 60-minute backup memory, it will not be affected by short power cuts. If mains power is unavailable for over 60 minutes, however, the recorder's display will reset to 0:00. In such a case, simply transfer the remote control's time to the recorder.

1. Press CLOCK three times.
2. Press TRANS with the remote control directed to the recorder's remote sensor window.

NOTES:
- If the day and month data is invalid (such as 31st April), the month digits are cleared automatically and the day digits will blink. Input again.
- If the year digits are automatically cleared in step 4, it is possible that you have input 29th February for a non-leap year. Input again.
- When the batteries are exhausted, the time display will change to "0:00" and start blinking. Replace all the batteries and set the clock again.

Setting The Tuner



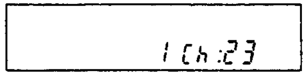
The procedure introduced here lets you assign receivable channels in your area to channel positions on your video recorder's tuner. Once stored, these can be accessed with the TV PROG. buttons.

1. **Press OPERATE to turn on the recorder.**

2. **Press TV/VIDEO to engage the VIDEO mode.**

3. **Press CH SET to engage the Channel Set mode.**

4. **Press CH SEARCH briefly to start automatic scanning for receivable channels.**
- Automatic scanning stops when a station is detected, and the channel position will blink.
- Holding down CH SEARCH will start reverse search.

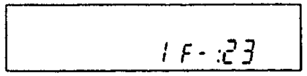


Ch = Regular CC = Cable

- If you don't want to store the station detected, simply press CH SEARCH to continue automatic scanning.

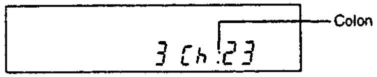
5. **Press SELECT to fine-tune the channel, if necessary.**
- When the picture is clear, proceed to step 8.

6. **Press TV PROG. +/– so that the picture becomes clear.**



7. **Press SELECT.**

8. **Press numeric keys or TV PROG. to select the channel position where you wish to store that TV station.**



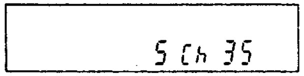
9. **Press CANCEL to store the station.**
- The colon will disappear when the station is stored.

10. **Repeat steps 4 through 9 for other receivable channels.**

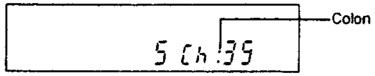
11. **Press DISPLAY to exit the Channel Set mode.**

TO DELETE STORED CHANNELS

1. Press TV PROG. to select the channel position you want to skip.
2. Press CH SET.



3. Press CANCEL.



- The colon will appear when the station is deleted. Channel position 5 can no longer be chosen by TV PROG. buttons.

4. Press DISPLAY to exit the Channel Set mode.

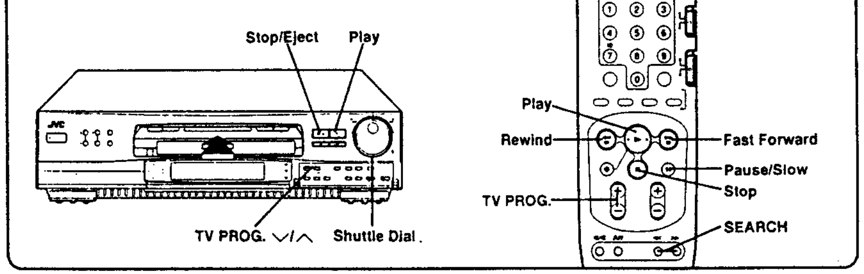
TO STORE NEW CHANNELS

1. Press CH SET.
2. Press CH.
   - Real channel starts blinking.
3. Press CH to change the band between Ch and CC, if necessary.
4. Press numeric keys to input the number of the real channel you want to store.
5. Press numeric keys to input the number of a vacant channel position.
6. Press CANCEL to store the channel.
7. Press DISPLAY to exit the Channel Set mode.

If using a Premiere decoder, ☞ p.34.

Playback

- Turn on the TV: Select VIDEO channel (or AV mode).



Basic Operations

1. **Load a cassette.**
   - The recorder power will come on automatically.
   - The counter will re-set to "0:00:00" automatically.
   - If the safety tab on the cassette is removed, playback will start automatically.
2. **Press Play to start playback.**
3. **Press Stop to stop playback.**
   - To rewind the tape, press Rewind or turn the Shuttle to the left and release it.
   - To fast-forward the tape, press Fast Forward or turn the Shuttle to the right and release it.
   - To stop rewind or fast-forward, press Stop.
4. **Press Stop/Eject on the recorder to eject the tape.**

Variable Speed/High-speed Search, Still Playback/Frame Advance/Forward Slow Motion

During Playback or Still:
- Press either SEARCH button for variable-speed search.
- The more times the button is pressed, the faster the playback picture will move.
- To decrease speed, press the button for the opposite direction.

During Playback:
- Press Fast Forward for high-speed forward search, or Rewind for high-speed reverse search.
- For short searches, keep Fast Forward or Rewind pressed for more than 2 seconds. When released, normal playback will continue.
- Press Pause/Slow to view a still picture.
- Press again to advance the picture frame by frame.
- Press Pause/Slow for 2 seconds for slow motion.

Other Functions

Manual Tracking

Your video recorder is equipped with automatic tracking control. If there is picture distortion or "breaks" in the sound of Hi-Fi VHS tapes caused by mistracking, you can finely adjust tracking manually.

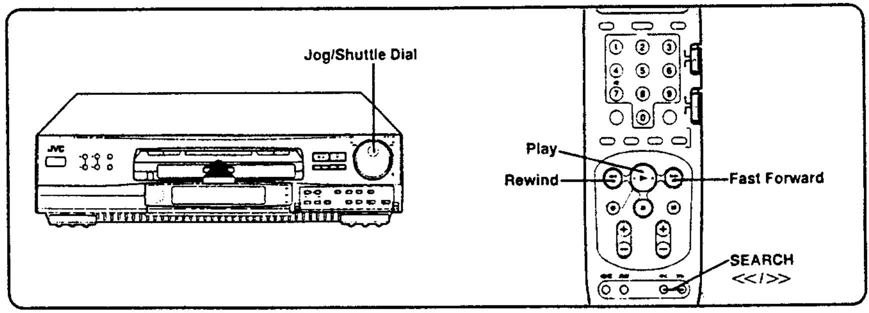
During Playback:
1. Press the recorder's TV PROG. ∨ and ∧ buttons simultaneously.
2. Press TV PROG. ∨ or ∧ to adjust tracking.
   - Press the recorder's TV PROG. ∨ and ∧ simultaneously to return to automatic tracking.

During Slow:
1.Simply press TV PROG. ∨ or ∧ to adjust tracking.

Repeat Playback

During Playback:
1. Press Play for more than 5 seconds, and release.
   - The Play indicator (▷) on the display panel will blink slowly.
   - The tape will be played all the way to the end, 20 times automatically, and then stop.
2. To stop the tape during Repeat Playback, press Stop.

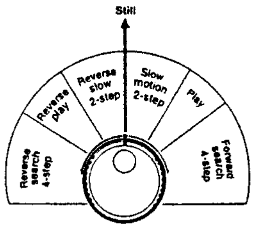
NOTES:
- The recorder automatically stops when still continues for more than 5 minutes.
- If the still picture is unstable, use the TV PROG. buttons to correct the picture.
- During search playback, some noise bars will appear.
- There is no audio during search, slow, still, or frame-by-frame playback.
- When a new tape is inserted, the recorder enters the automatic tracking mode automatically.
- Tapes with monaural soundtracks (normal audio) are automatically played back in the NORM mode. When playing back tapes with Hi-Fi stereo soundtracks, ☞ p.16.
- When playing back LP recordings in the search, still, or frame by frame playback mode, the picture will be distorted, and there may be a loss of colour.



Jog/Shuttle Control

You can view pictures in slow to fast motion, or frame-by-frame.

During Still or Playback:
1. Turn the outer ring (Shuttle) to the right for forward slow motion and search.
   - Release the Shuttle for a still picture, or...
   - For fast-forward with a visible picture, turn the Shuttle all the way to the right and release it within 1 second.
2. Turn the outer ring (Shuttle) to the left for reverse slow motion and search.
   - Release the Shuttle for a still picture, or...
   - For rewind with a visible picture, turn the Shuttle all the way to the left and release within 1 second.



During Still or Playback:
1. Rotate the inner dial (Jog) clockwise or counterclockwise for jog control. The tape moves frame-by-frame at the speed with which the dial is rotated, in the direction the dial is rotated.

To resume normal playback, press the Play button.

Open Search Function

Your video recorder lets you view the picture being rewound or fast-forwarded so you can easily check how far the tape has gone.

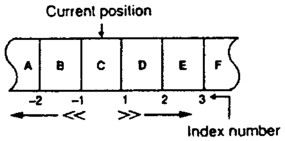
During Rewind:
1. Keep the remote's Rewind button pressed, or turn the Shuttle Dial fully to the left.
   - The rewinding tape's picture will be visible.
2. Release the Rewind button or Shuttle Dial to resume normal rewinding.

During Fast Forward:
1. Keep the remote's Fast Forward button pressed, or turn the Shuttle Dial fully to the right.
   - The fast forwarding tape's picture will be visible.
2. Release the Fast Forward button or Shuttle Dial to resume normal fast forwarding.

Index Search

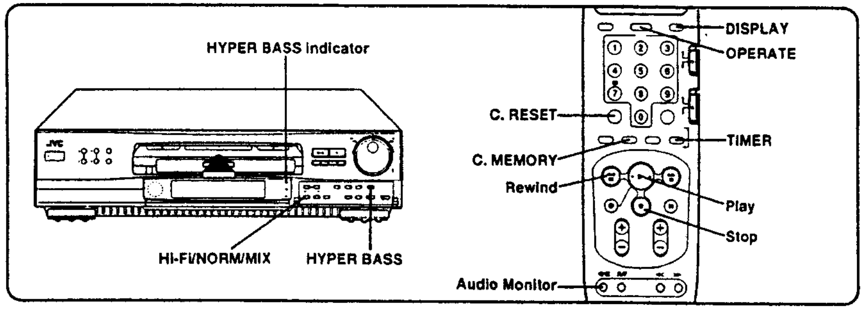
Your recorder automatically marks index codes at the beginning of each recording. This function gives you quick access to any one of 9 index codes in either direction.

During Stop:
1. Press SEARCH << or >>. "INDEX –1" or "INDEX 1" will be displayed on the display panel and search will begin in the corresponding direction.
2. If you wish to access index codes 2 through 9, press SEARCH repeatedly until the correct index number is displayed.
   Ex.: To locate the beginning of B from the current position, press SEARCH << twice.
   To locate the beginning of D from the current position, press SEARCH >> once.



- When the specified index code is found, playback will start automatically.

Playback (cont'd)



Other Functions (cont'd)

Counter Memory

During Playback:

1. Press DISPLAY until a counter reading appears on the display panel.
2. Press C.RESET at a point you wish to locate later.
   - The counter will read "0:00:00".
3. Press C.MEMORY.
   - The M indicator will light on the display panel.
4. When you wish to return to that point, press Stop and then Rewind.
   - The tape will rewind and stop at about "0:00:00" automatically.
5. To cancel the Counter Memory mode, press C.MEMORY again.

Next Function Memory

Your recorder can memorise what to do after rewind.
During Stop:

For automatic start of playback after the tape is rewound:

1. Press Rewind.
2. Press Play within 2 seconds.

For automatic power off after the tape is rewound:

1. Press Rewind.
2. Press OPERATE within 2 seconds.

For automatic timer standby after the tape is rewound:

1. Press Rewind.
2. Press TIMER within 2 seconds.

Soundtrack Selection

During Playback:
Your video recorder is capable of recording three soundtracks (HIFI L, HIFI R and NORM) simultaneously, and playing back the selected soundtrack.

- Pressing Audio Monitor on the remote control changes the track:

Track: (on display panel)	Use:
L + R	for Hi-Fi stereo tapes.
L	for main audio of bilingual tapes.
R	for sub audio of bilingual tapes.

- Pressing HI-FI/NORM/MIX on the recorder changes the mode:

Mode:	Track: (on display panel)	Use:
HIFI	L and/or R	for Hi-Fi stereo tapes
NORM	NORM	for audio-dubbed tapes.
MIX	NORM + L and/or R	for audio-dubbed tapes.

NOTE:

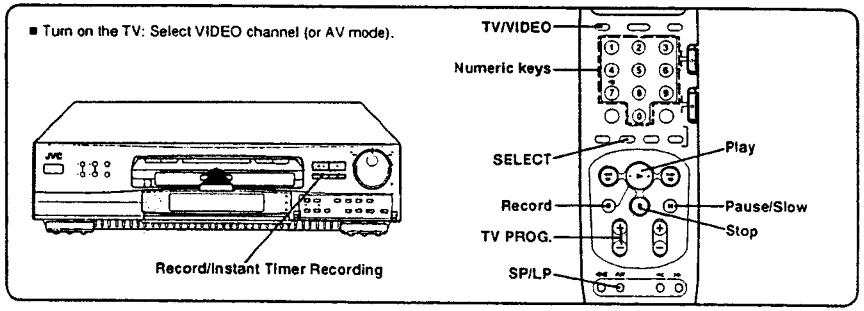
- Normally use the L + R position. Then Hi-Fi stereo tapes are played back in stereo, and tapes with normal audio only are played back automatically in the NORM mode.

Hyper Bass

You can boost the bass sounds of music videos to make them sound more exciting.
During Playback :

1. Press HYPER BASS.
   - The HYPER BASS indicator will light, and bass sounds will be boosted.
2. Press HYPER BASS again to cancel the Hyper Bass mode.

Recording


- Turn on the TV: Select VIDEO channel (or AV mode).

Basic Operations

1. **Load a cassette.**
   - The recorder power will come on automatically.
2. **Press TV/VIDEO to engage the VIDEO mode.**
3. **Press TV PROG. or the numeric keys to select the channel you wish to record.**
4. **Press SP/LP to select the tape speed.**
5. **Press Record and Play simultaneously.**
6. **Press Pause/Slow to pause recording.**
7. **Press Play to resume recording.**
8. **Press Stop to stop recording.**

To Watch Another Programme While Recording

During Record:

1. If your recorder is connected to the TV via AV connection, press TV/VIDEO.
   - The recorder's VIDEO indicator and the TV broadcast being recorded will disappear.
2. Use the channel controls on the TV to select the other channel you wish to view.
   - The programme selected with the TV channel controls will appear on the TV screen while the one selected with the video recorder's channel controls will be recorded on the tape.
   - If the Premiere decoder is connected to the recorder (☞ p.34), you can select the Premiere channel as well with the TV channel controls.

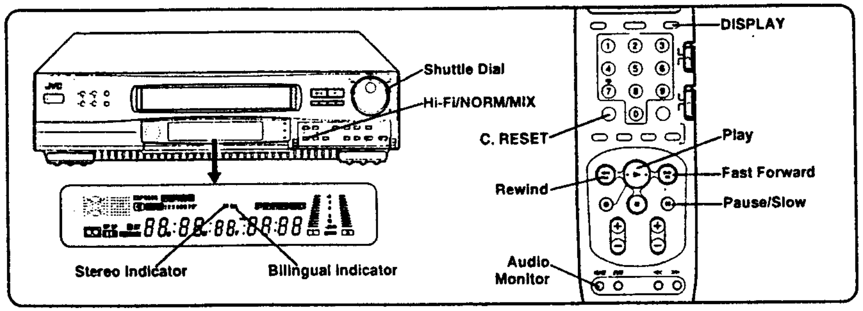
Instant Timer Recording (Off Timer)

You can start a recording and then set the recorder to shut off automatically after a set duration.
During Record:

1. Press Record on the recorder. "ITR" and "0:30" indications appear, advising that power will switch off after 30 minutes.
2. Press Record again to delay the off-time by 30-minute increments (up to 4 hours).
   - For more precise setting, use the remote control's SELECT and TV PROG. buttons to set the exact time required (possible up to 8 hours and 59 minutes).

NOTES:

- To start recording with the recorder's Record button, press it once on its own.
- After pause, when recording is resumed, a few frames recorded before the pause may be overlapped by the new recording. This is meant to reduce picture distortion and is not a malfunction.
- The recorder automatically stops when record-pause continues for more than 5 minutes.
- If the Record button does not work, check to see if the cassette's safety tab has been removed.
- The channel cannot be changed while recording is in progress. To change the channel, engage the record-pause mode, then change the channel.
- The recorder automatically rewinds when the end of the tape is reached during recording.
- The recorder automatically places an index code on the tape every time recording begins. For information on the Index Search function, ☞ p. 15.



Other Functions

Elapsed Recording Time Indication

When you need to know the exact time of a recording.

1. Press DISPLAY until a counter reading appears on the display panel.
2. Press C.RESET before starting recording or playback.
    - The counter will be reset to "0:00:00" and show the exact elapsed time as the tape runs.

Display Button

When you wish to check the remaining tape time, clock time, date, or counter reading.

1. Press DISPLAY to display the remaining tape time.
2. Press DISPLAY again to display the current clock time.
3. Press DISPLAY again to display the current date.
4. Press DISPLAY again to display the counter reading.

Retake

You can cut out unwanted parts of a TV programme while you're recording it.

During Record:

1. Press Pause/Slow.
2. Turn the Shuttle dial or press Rewind (or Fast Forward) for search in the corresponding direction.
    - Release to return to Record-Pause mode.
3. Press Play when you wish to resume recording.

Stereo And Bilingual

Your recorder is equipped with a Sound-Multiplex decoder for reception of stereo and bilingual broadcasts.

- When a stereo programme is being received, the ST indicator lights on the display panel.
- When a bilingual programme is being received, the BIL indicator lights on the display panel.

To Record Stereo Programmes

Stereo programmes are automatically recorded in stereo on the Hi-Fi audio track (with the normal audio track recording mixed L and R channel sound). No special operation is required. Simply follow the basic recording procedure.

- To listen to the stereo soundtrack while recording, select "L+R" with Audio Monitor. ☞ p.16

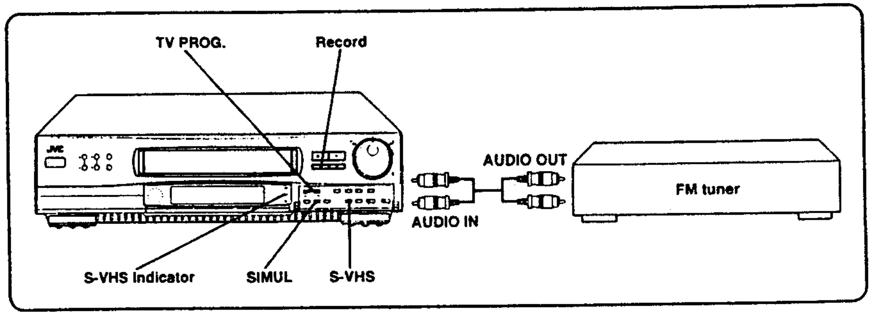
NOTE:

- If the quality of stereo sound being received is poor, the ST indicator will go off, and the broadcast will be received in monaural with better quality.

To Record Bilingual Programmes

Bilingual programmes are automatically recorded in bilingual on the Hi-Fi audio track. The main soundtrack will be recorded on the normal audio track.

- To listen to the Hi-Fi soundtrack during recording, select "L" for Main, and "R" for Sub.
- To listen to the normal soundtrack, select "NORM" with the Hi-Fi/NORM/MIX button on the recorder.



Simulcast Recording

Your recorder lets you record an audio programme while recording a TV programme. In the Simulcast mode, the TV soundtrack is recorded on the normal audio track and the external audio programme is recorded on the Hi-Fi audio track, so you can have two independent programmes. If FM simulcast TV programmes are available, record the TV programme and its FM-broadcast soundtrack simultaneously.

Preparation

- Connect the FM tuner to the rear panel AUDIO IN connectors.
- Set the FM tuner to the desired broadcast.

1. Press TV PROG. or the numeric key to select the TV programme you wish to record.
2. Select the Simulcast mode by pressing the SIMUL button.
    - "SC" will appear on the display panel.
3. Press the Record button to start recording.

NOTES:

- If you stop recording with the Pause/Slow button to avoid unwanted TV programme material, the audio programme is also cut.
- After finishing simulcast recording, be sure to press the SIMUL button to cancel the Simulcast mode, otherwise it is not possible to record on the Hi-Fi track from the built-in tuner.

S-VHS And VHS

Your video recorder can record in either S-VHS or VHS.

- To record in S-VHS, insert a cassette marked "S-VHS". The S-VHS indicator will light and the S-VHS recording mode is automatically selected.
- To record in VHS, insert a cassette marked "VHS". The VHS recording mode is automatically selected.
- You can also record in VHS on S-VHS cassettes. For this purpose, after inserting an S-VHS cassette, press the S-VHS button. The S-VHS indicator will go out.

Cassette	Type of recording	S-VHS indicator
S-VHS	S-VHS	On
	VHS	Off
VHS	VHS	Off

Preparation For ShowView Timer Programming

What is ShowView?

For timer-recording to take place, information such as the channel, date, start time and stop time of the programme you wish to record, must be programmed into the recorder's timer memory. The ShowView system condenses all this information into a simple ShowView code number 4 to 9 digits long.

Since the ShowView number contains information on the channel number, if you live in an area that uses channel numbers that are different from those listed in your TV directory, these "differences" must be input into the remote control. This process is called "Channel Mapping" (CH MAP).

CHECK THE GUIDE PROG. NUMBERS

Preparation

- Make sure you have set the clock. (☞ p. 12)
- Make sure you have set the tuner. (☞ p. 13)
- Get a TV schedule listing (magazine, newspaper, etc.) which carries ShowView code numbers.

[A] Find out the channel position numbers your recorder tunes to when you use the TV PROG. –/+ buttons (the positions you stored on page 13) and write them into the list.

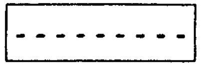
Example: 1, 2, 3, 4, 6, 8, 10, 12

[B] Look through the TV listing and find out the broadcast station name of each of the channels.

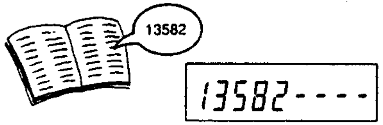
[C] Use the ShowView numbers to find out the GUIDE PROG. numbers for each of the stations.

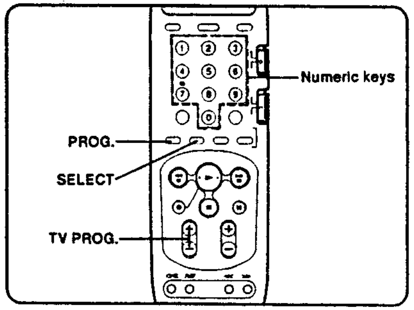
How to check:

1. **Press PROG.**

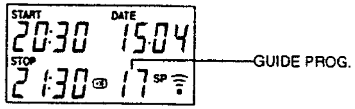


2. **Press the appropriate numeric keys to enter the ShowView number for a programme as it appears in your TV listing.**
   - Make sure the ShowView number is for a programme which has not been broadcast yet.





3. **Press SELECT.**



- The number that appears as the channel number is the GUIDE PROG. number for that station. Write it into the list.

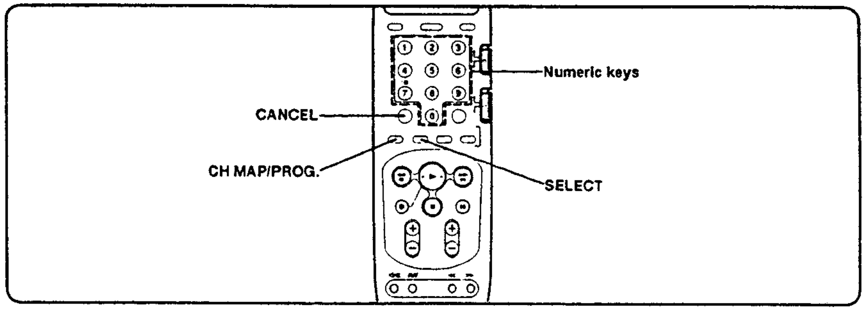
ATTENTION

- When you press the SELECT button in step 3, "Err(or)" may appear on the LCD.
  This may mean that...
  - you entered a ShowView number for a programme which has already passed.
  - the GUIDE PROG. number for that station is a 3-digit number.
- For 3-digit GUIDE PROG. numbers, refer to your TV listing or consult your JVC dealer.

4. **Press PROG. and display the clock time.**
   - Repeat steps 1– 4 and check the GUIDE PROG. number for each of the channels your recorder receives.

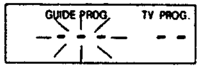
[A] Channel on your recorder (TV PROG. number)	[B] Station name	[C] GUIDE PROG. number
(ex.) 1	ARD	1
2	ZDF	2
3	WDR	17

[D] In cases where the channel number your recorder receives [A] and the GUIDE PROG. number [C] for that station do not match, it is necessary to make changes in the remote control's Channel Map. (continued on next page)

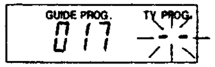


INPUT GUIDE PROG. NUMBERS INTO REMOTE

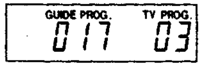
1. **Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.**



2. **Press the appropriate numeric keys to enter the GUIDE PROG. number ([C] column in your list).**
   Ex.: For "1", press
   0, 0, 1.
   For "10", press
   0, 1, 0.

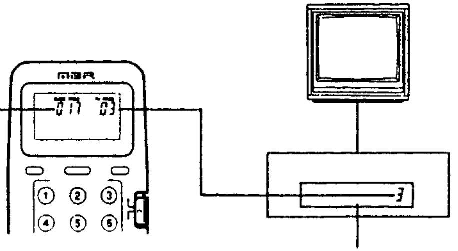


3. **Press the appropriate numeric keys to enter the channel number your recorder receives that station on. (TV PROG. number, [A] column in your list.)**
   Ex.: For "3",
   press 0, 3.



4. **Press SELECT.**
   - To input other channels into the Channel Map, repeat steps 2 – 4 above.
5. **Press CH MAP and display the clock time.**

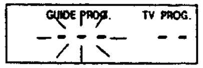
Ex.: From column [C] in the list:
The GUIDE PROG. number
for WDR is "17".
From column [A] in the list:
The TV PROG. number
for WDR is "3".



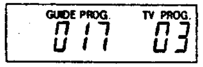
Recorder's Display Panel

TO CHECK/CANCEL GUIDE PROG. NUMBERS IN THE REMOTE

1. Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.



2. Press SELECT until the GUIDE PROG. number you wish to check or cancel is displayed.



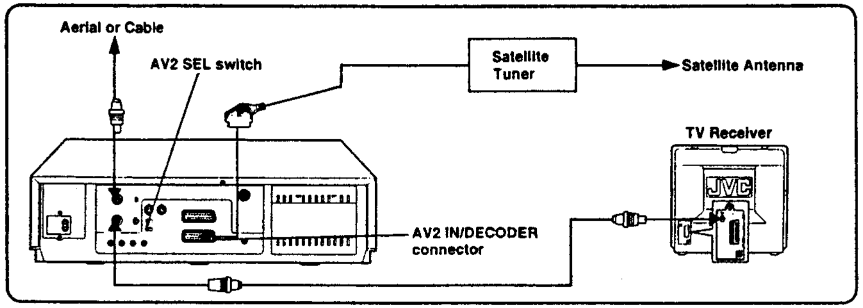
To Cancel:

3. Press CANCEL.
4. Press CH MAP and display the clock time.

NOTES:

- When you move to another area, be sure to make changes in the Channel Map as necessary.
- When the remote control's batteries are replaced, the time or Guide Channel numbers you have set may be erased. If this happens, reset them again.

Preparation For ShowView Timer Programming (cont'd)

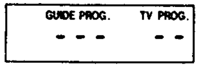


TO RECORD SATELLITE PROGRAMMES

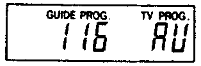
Timer programming is also possible for programmes received via satellite tuner.

Preparation

1. **Connect the satellite tuner as illustrated to the AV2 IN/DECODER connector.**
   - Make sure the AV2 SEL switch is set to "AV2".
2. **Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.**



3. **Press the appropriate numeric keys to enter the GUIDE PROG. and TV PROG. numbers as follows:**
   - For GUIDE PROG., enter the GUIDE PROG. numbers of the satellite stations that are receivable through your satellite tuner.
   - For TV PROG., always enter "00". When "00" is entered, "AU" will appear in the LCD.



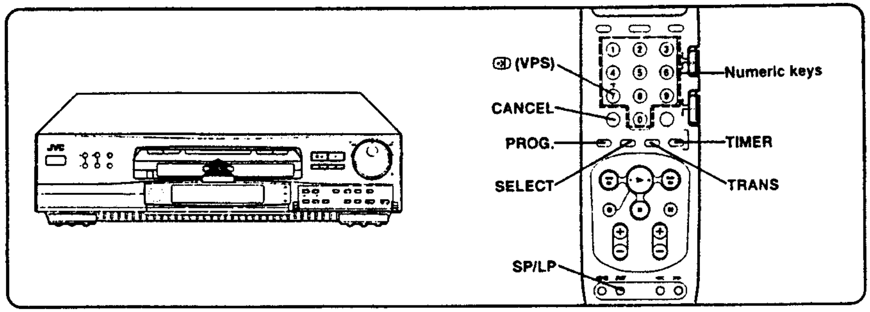
4. **Press SELECT.**
   - To input other satellite stations into the Channel Map, repeat steps 3 – 4 above.
5. **Press CH MAP and display the clock time.**

Operation

1. Turn on the satellite tuner and select the channel you wish to record.
2. Enter the ShowView number in the same way as shown in steps 1 – 7 of ShowView Timer Programming on p.23.

NOTE:
- After selecting the programme you wish to record from your satellite tuner, set the system's timer. If your satellite tuner does not have a timer, leave it switched on.

Timer-Recording — ShowView Timer Programming—



The built-in ShowView programming system greatly simplifies timer programming because you won't have to enter all the data that is usually necessary (such as date, start and stop time, and channel).

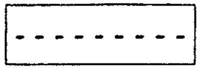
Preparation

Make sure you have set the GUIDE PROG. numbers (☞ p.20 or 22).

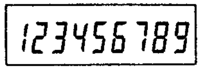
Insert a cassette with the safety tab in place.

- The recorder power will come on automatically.

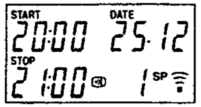
1. **Press PROG.**



2. **Press the appropriate numeric keys to enter the ShowView number for the TV programme you wish to record.**
   - For ShowView numbers, refer to your newspaper or TV directory.



3. **Press SELECT.**
   - The LCD will show the data for the ShowView number you just entered.
   - If the entered ShowView number is not proper, "Err" appears on the LCD. Check the ShowView number again and re-enter it.
   - Normally, you should leave " ⊛ " on so you can take advantage of VPS recording (☞ p.26). If you wish to cancel VPS, press ⊛ (the numeric key "7").



WEEKLY program: After step 3, press numeric key "9".
DAILY program: After step 3, press numeric key "8".

4. **Press SP/LP to select the tape speed.**
5. **Press TRANS with the remote control directed toward the recorder's Remote Sensor window.**
6. **Press PROG.**
   - The LCD returns to the clock display and the entered data will be automatically cleared.
   - If you need to set another program, repeat steps 1 – 6.
7. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO MAKE CORRECTIONS

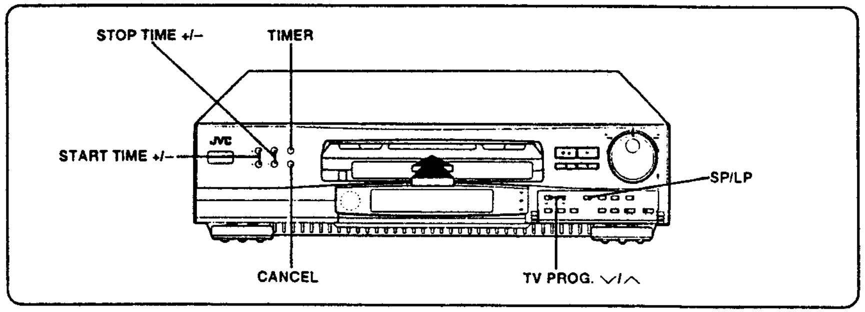
- In step 2, press CANCEL to backspace and re-enter the correct ShowView number.
- After checking the data in step 3, press PROG. twice and re-enter the correct ShowView number.
- After checking the data in step 3, if you want to delay the stop time, etc. press SELECT to make the item you want to change blink, and input new data.
- Pressing PROG. clears the programmed data.

To check, cancel and replace programs, ☞ p.25

To use the recorder after setting to the Timer mode, ☞ p.25

Timer-Recording (cont'd)

— Express Timer —



The "Express Timer" is the quick, "shortcut" method of directly programming your video recorder's timer for same-day or next-mornig recording. TV shows to be broadcast within 24 hours can be programmed for automatic recording simply by pressing three buttons (conveniently numbered) on your recorder's control panel.

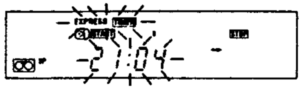
TIMER PROGRAMMING IS NOT POSSIBLE UNLESS THE CLOCK HAS BEEN SET.

Preparation

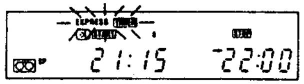
Insert a cassette with the safety tab in place.

- The recorder power will come on automatically.
- The display panel will show the channel being received.
- To change the channel, press TV PROG.
- To change the tape speed, press SP/LP.

1. **Press START TIME +.**
   - The current time will appear on the display panel.
2. **Press START TIME +/– to set the start time.**
   - START TIME + (STOP TIME +) advances the time and START TIME – (STOP TIME –) reverses the time.
   - Press briefly to change by 1 minute. Hold the button down to change by 30-minute increments.



   - After the start time is set, the date (today or tomorrow) and channel will be displayed for 3 seconds.
3. **Press STOP TIME +.**
   - The start time will be transferred over to the stop time position.
4. **Press STOP TIME +/– to set the stop time.**



   - Normally, you should leave ⊡ on so you can take advantage of VPS recording. (☞ p.26) If you wish to cancel VPS, press ⊡ (the numeric key "7").
5. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO CANCEL THE PROGRAM

While timer programming, press CANCEL.

- Pressing CANCEL again disengages the Timer Program mode.

Or...

While in the Timer mode, first press TIMER to disengage the Timer mode, and press START TIME+. Then press CANCEL twice.

TO CHECK PROGRAMMED SETTINGS

While in the Timer mode, press START TIME + to check the settings you have programmed. DO NOT press START TIME + while the Timer mode is cancelled because this will clear the programmed data for a new entry.

NOTE:

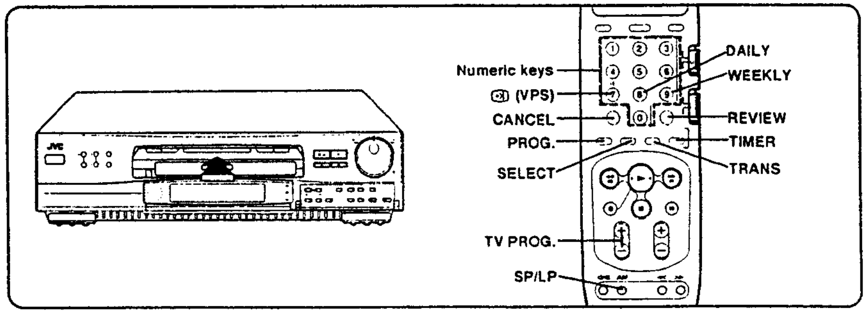
- If you are using a satellite tuner and wish to timer-record satellite programmes, before starting step 1, press TV PROG. until "AU 2" appears on the recorder's display panel.

ATTENTION:

- If you have programmed the timer's Program 8 (via the on-screen programming facility that is available when an optional VPT (teletext) adapter is connected (☞ p.39), using the Express Timer will clear that data from Program 8 and replace it with the Express Timer data.

To use the recorder after setting to the Timer mode, ☞ p.25

— LCD Timer Programming —



The LCD timer programming lets you input all necessary settings manually. It's helpful if the ShowView number for the TV programme you want isn't readily available.

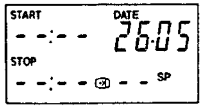
Preparation

Insert a cassette with the safety tab in place.

- The recorder power will come on automatically.

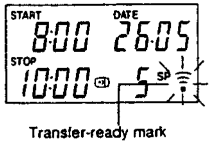
1. **Press PROG. twice.**
2. **Press numeric keys to input the date.**

   Ex.: For 26th May, press 2 6 0 5.



3. **Press numeric keys to input the start time, stop time and channel.**

   Ex.: For 8:00, press 0 8 0 0.



Transfer-ready mark

   WEEKLY program: After you input the channel and the transfer-ready mark appears on the LCD, press numeric key "9".

   DAILY program: After you input the channel and the transfer-ready mark appears on the LCD, press numeric key "8".

   - Normally, you should leave ⊡ on so you can take advantage of VPS recording. (☞ p.26) If you wish to cancel VPS, press ⊡ (the numeric key "7").
4. **Press SP/LP to select the tape speed.**
5. **Press TRANS with the remote control directed to the recorder's Remote Sensor window.**
6. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO MAKE CORRECTIONS

- During steps 2 and 3, press CANCEL to backspace and input new data.
- After setting the channel in step 3, press SELECT to make the item you want to change blink, and input new data.
- Pressing PROG. clears the programmed data.

TO CHECK, CANCEL AND REPLACE PROGRAMS

To check preset programs:

1. Press REVIEW until the program settings are displayed on the display panel.
   - Program 1 is displayed with the number blinking.
2. Press SELECT to review the program contents in succession.
3. To check another program, press REVIEW again.

To cancel the program:

4. Press CANCEL.
   - You can press CANCEL at any stage while the program is open.

To replace a program:

5. Use the SELECT and TV PROG. buttons to input new data.

TO USE THE RECORDER AFTER SETTING TO THE TIMER MODE

For safety, your recorder disables all other functions while in the Timer mode.

- Press TIMER to disengage the Timer mode.
- To re-engage the Timer mode, press TIMER.

NOTE:

- If you are using a satellite tuner and wish to timer-record satellite programmes, make sure to input "0" for the channel number in step 3 to make "AU" appear.

Timer-Recording (cont'd)

Error Indications

The following error indications may appear on the recorder when you press the TIMER button to engage the Timer Standby mode. Here's why, and what you should do.

- "TIMER" and "📼" on the display panel continue blinking.

WHY: There is no cassette in the recorder.
WHAT TO DO: Insert a cassette.

- The cassette is automatically ejected. "TIMER" and "📼" continue blinking.

WHY: The inserted cassette has its safety tab removed.
WHAT TO DO: Insert a cassette with its safety tab intact. Or cover the safety tab hole of the cassette with adhesive tape and re-insert it. ☞ p.6.

- "TIMER" blinks for 10 seconds and the Timer Standby mode is cancelled.

WHY: There are no preset programs in memory, or they have all been incorrectly preset.
WHAT TO DO: Check the programmed data and re-program it as necessary. Press TIMER again.

Other Indications

- "TIMER" steady lit (with clock display).

WHY: The recorder is in the Timer Standby mode. This is the normal display you should see when you press the TIMER button.

- "[illegible]" and "TIMER" steady lit.

WHY: Normal display while timer-recording is in progress.

- The cassette was ejected, with power off and "TIMER" and "📼" are blinking.

WHY: This means that the end of the tape was reached while timer-recording was in progress. Therefore, the preset program may not be recorded in its entirety.

- "0:00" blinking.

WHY: This means the clock must be set. It's displayed when time-keeping is terminated due to a power failure or because the recorder's power plug was pulled from the AC outlet.
WHAT TO DO: Set the clock. ☞ p.12.

- If power was interrupted, it's also likely that all preset timer programming data has been erased. Please check and re-program as necessary.

- "-- -- -- -- --" is displayed for about 5 seconds when the TRANS button is pressed.

WHY: Data was not successfully transferred. The program may have been incorrectly preset, or the recorder's clock has not been set, or all the recorder's timer programs (1 – 7) are preset.
WHAT TO DO: Check the LCD program, and re-program as necessary. Transfer the correct data. Or cancel unnecessary programs, and transfer again.

VPS Recording

Available from some TV stations, VPS (Video Program System) is a service which assures accurate timer recording. Special code signals are transmitted so your recorder starts and stops recording when the preset TV programmes actually start and end — even if there is a schedule change.

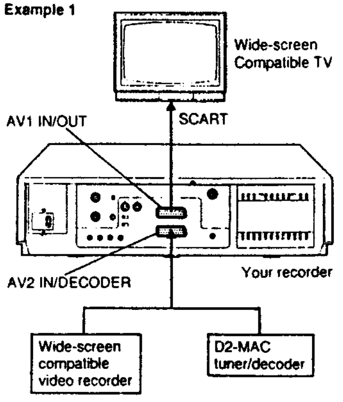
TO USE VPS SERVICE

- You do not have to cancel "VPS" even for non-VPS programmes, because those programmes will be recorded at the preset times.
- If you wish to cancel "VPS", press the ⊡ button (the numeric key "7") on the remote control just before transferring the programmed data to the recorder. The ⊡ mark on the LCD will go out.

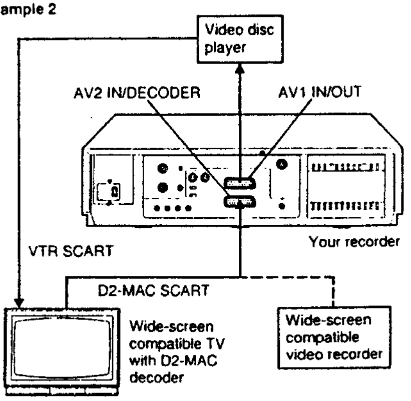
Information On Wide-Screen Viewing And Recording

CONNECTIONS

Example 1


Wide-screen
Compatible TV
AV1 IN/OUT
SCART
AV2 IN/DECODER
Your recorder
Wide-screen
compatible
video recorder
D2-MAC
tuner/decoder

Example 2


Video disc
player
AV2 IN/DECODER
AV1 IN/OUT
VTR SCART
Your recorder
D2-MAC SCART
Wide-screen
compatible TV
with D2-MAC
decoder
Wide-screen
compatible
video recorder

Wide-Screen Viewing And Recording

If your television is compatible with the 16:9 wide-screen format, please read this page to take full advantage of this recorder's Auto 16:9 function.

16 : 9 REC
AUTO
MANUAL

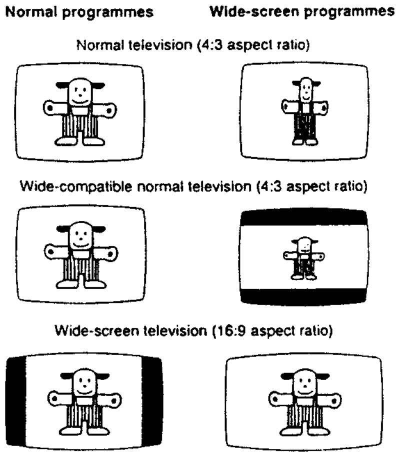
Set this switch to AUTO. Then your recorder will automatically record wide-screen programmes as "wide" and normal programmes as "normal".
Whichever position of this switch is selected, your recorder will automatically:

- play back wide-screen programmes as "wide" and normal programmes as "normal".
- control the television (if equipped with Auto Aspect Ratio Switching function) so that both types of programmes are displayed with the right proportions.

NOTES:

- When using the Auto 16:9 function, press TV/VIDEO to make the VIDEO indicator disappear from the display panel.
- When connecting a wide-screen compatible TV to the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to "AV2 IN".
- For the recorder to control the television, it must be connected to the TV via the AV1 IN/OUT connector.
- For the recorder to record in the correct mode automatically, the signal must be applied to either the AV1 IN/OUT or AV2 IN/DECODER connector.
- When recording wide-screen programmes via the S INPUT (S IN) or V INPUT connector, for example in tape-to-tape dubbing, set the 16:9 REC switch to MANUAL.
- When playing back wide-screen programmes via the S OUT connector, switch the television to the 16:9 mode manually.

What You See On The Screen


Normal programmes
Wide-screen programmes
Normal television (4:3 aspect ratio)
Wide-compatible normal television (4:3 aspect ratio)
Wide-screen television (16:9 aspect ratio)

Other Functions

Remote A/B Code Switching

The remote control is capable of controlling two JVC video recorders independently; one set to respond to your remote control's A code control signals and another set to respond to B code control signals. The remote control is preset to send A code signals because your video recorder is initially set to respond to A code signals. You can easily modify your video recorder to respond to B code signals.

1. Unplug the recorder's power cord from the AC outlet.
2. Set the A/B switch to B.
3. Plug the power cord back into the AC outlet. Do not use other remote controls at this stage.
4. Turn the recorder power on using the remote control's OPERATE button. The recorder will now only respond to B code signals.

NOTE:
Some TV sets may malfunction in response to the B mode. If this happens switch back to the A mode.

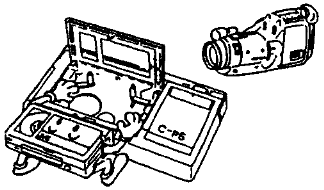
Child Lock Function

To avoid unwanted operation and prevent accidental recording...

1. Press the remote control's OPERATE button to turn the recorder's power off. Keep this button pressed for about 2 more seconds after the power LED indicator has gone off.
   - The Child Lock indicator (–) will appear on the display panel.
2. Child Lock is cancelled when you switch the recorder's power on with the remote's OPERATE button.
   - Pressing the TIMER button during timer-recording also cancels the Child Lock mode.

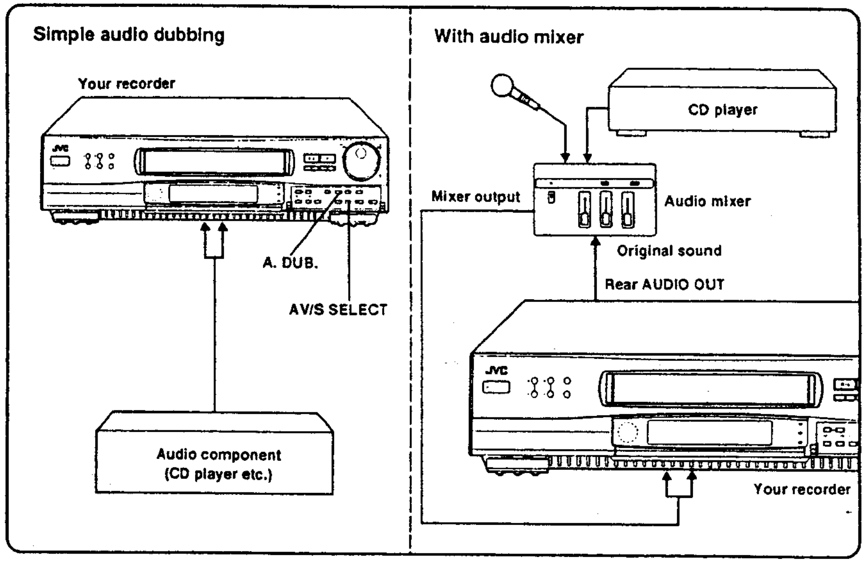
NOTES:
- While Child Lock is engaged, make sure you keep your remote control in a safe place inaccessible to children.
- Timer-recording is possible in the Child Lock mode. After timer-recording is done, Child Lock remains in effect.

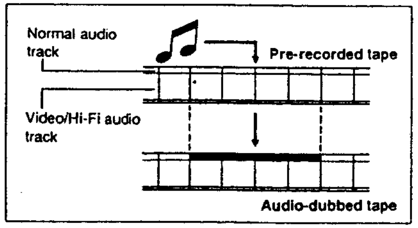
To Watch A Compact VHS Tape



Compact VHS camcorder recordings (PAL) can be played on your video recorder. Place the recorded cassette into a C-P6 Cassette Adapter and it can be used like any full-sized VHS cassette.

Audio Dubbing





Audio dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack.

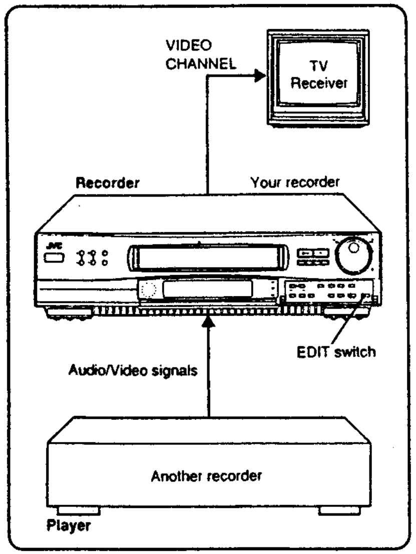
Preparation

Connect an audio component to the recorder's AUDIO IN L and R connectors. (For monaural equipment, use the L connector.)

1. Select the recorder's external input mode by pressing numeric key "0", and then press recorder's AV/S SELECT so that [S] appears on the display panel.
2. Start playback and engage the Still mode at the point from which you wish to start audio dubbing.
3. Press A. DUB.
4. Start playback of the audio source, and then press Play.
   - Audio dubbing will start.
5. Press Pause/Slow to stop audio dubbing temporarily.
6. Press Stop to stop audio dubbing.

NOTES:
- When monitoring the sound during Audio Dubbing, the normal soundtrack will be automatically selected. If you wish to hear the mixed sound (Hi-Fi + normal soundtracks), press the Hi-Fi/NORM/MIX button to select the MIX mode. ☞ p.16.
- Audio dubbing will stop automatically at the counter reading of "0:00:00", and the recorder will enter the Play mode. Check the counter before starting audio dubbing.
- Audio dubbing is also possible with input via the rear panel AV1 IN/OUT or AV2 IN. In these cases, select the appropriate input mode:
  - With AV1 IN/OUT, press numeric key "0" and then AV/S SELECT to select the AU 1 mode.
  - With AV2 IN, first set the AV2 SEL switch on the rear of the recorder to "AV2 IN", then press numeric key "0" followed by AV/S SELECT to select AU 2 mode.
- Audio dubbing is not possible with cassettes whose safety tab has been removed.

Editing

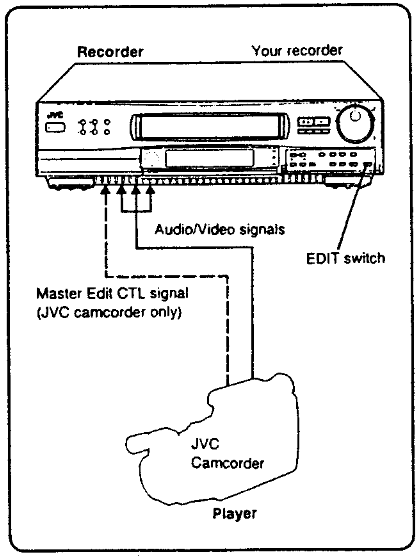

VIDEO
CHANNEL
TV
Receiver
Recorder
Your recorder
EDIT switch
Audio/Video signals
Another recorder
Player

Editing From Another Recorder

Preparation

- Connect another video recorder to the rear panel 21-pin AV1 or AV2 socket, or S IN and AUDIO IN connectors.
- Engage the external input mode. (☞ p.31)
- Set the EDIT switch to ON.

1. Load the source tape in the player, and the recording tape in your recorder.
2. Select the recording speed (SP or LP).
3. Put your recorder in the Record-Pause mode.
4. Play back the source tape to search for scene to be edited.
5. Press the recorder's Play button where you want to start editing.
6. Press the recorder's Pause button to stop editing.
7. Repeat steps 4 through 6 to continue editing.


Recorder
Your recorder
Audio/Video signals
EDIT switch
Master Edit CTL signal
(JVC camcorder only)
JVC
Camcorder
Player

Editing From A JVC Camcorder

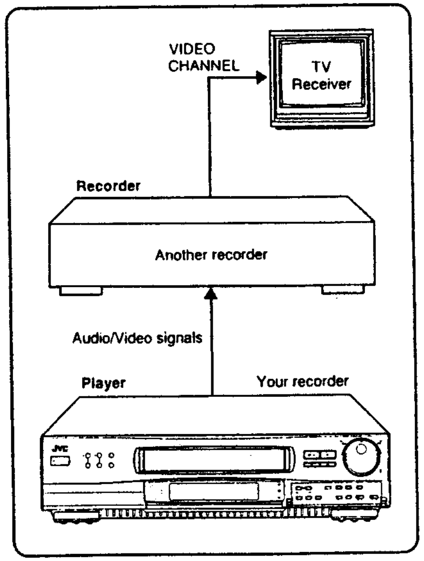
Preparation

- Connect the camcorder's AV OUT connector to the recorder's rear panel 21-pin AV1 or AV2 socket, or S IN and AUDIO IN connectors.
- Connect the AV output cable's mini-plug to the PAUSE terminal of the recorder.
- Engage the external input mode.(☞ p.31)
- Set the EDIT switch to ON.

1. Follow steps 1 through 7 of "Editing From Another Recorder" on the left.

NOTES:

- If the camcorder is equipped with the Master Edit Control system, you can control the recorder using the camcorder's controls. See the camcorder's instruction manual for operating procedures.
- With this connection, you can also use the camcorder as a video camera for direct recording onto the recorder's tape. Put the recorder in Record-Pause and use the camcorder's start/stop trigger to start and pause recording. (For direct recording with a separate video camera, a camera adapter is necessary.)


VIDEO
CHANNEL
TV
Receiver
Recorder
Another recorder
Audio/Video signals
Player
Your recorder

Editing To Another Recorder

Preparation

- Connect your recorder's AV1 IN/OUT or S OUT/AUDIO OUT to the audio and video input connectors of the recording deck.
- Set EDIT switch to ON.
- Engage the recorder's AUX mode.

1. Put the recorder in the Record-Pause mode.
2. Play back the source tape to search for a scene to be edited.
3. Press both the player's and recorder's Play buttons simultaneously.
4. Press the recorder's Pause button to stop editing.
5. Repeat steps 2 through 4 to continue editing.

Advantages Of S-VHS Video Recorders

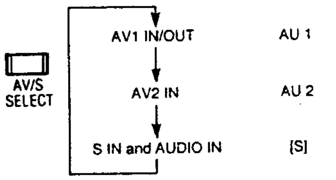
You can edit from VHS to S-VHS, S-VHS to VHS, or, needless to say, from S-VHS to S-VHS.

- From VHS to S-VHS: Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS: Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS: All signals will be transferred without degradation.

How To Select The External Input Mode

To record external audio and video signals;

1. Press the remote control's numeric key "0".
2. Press the AV/S SELECT on the front of the recorder to select the appropriate external input mode.
   - Pressing AV/S SELECT rotates the input mode as follows:

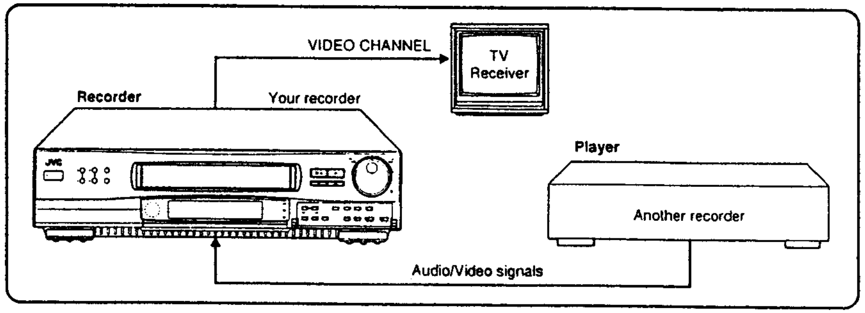


Connector	Mode (on display panel)
AV1 IN/OUT	AU 1
AV2 IN	AU 2
S IN and AUDIO IN	[S]

NOTE:

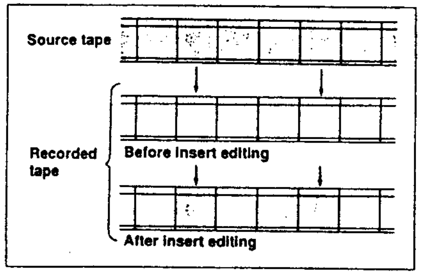
- To record input signals from the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to AV2 IN.

Editing (cont'd)



Insert Editing

Insert editing replaces part of the recorded scene with new material. Both the picture and Hi-Fi audio soundtrack are replaced with new ones, while the normal audio soundtrack remains unchanged. If you wish to change the normal audio track as well, use the audio dubbing function simultaneously.



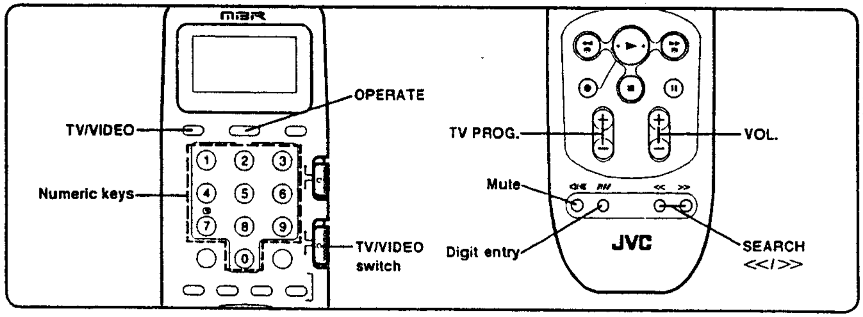
Preparation

- Connect another video recorder to the rear panel 21-pin AV1 or AV2 socket, or S IN and AUDIO IN connectors.
- Engage the external input mode:
  - If the player is connected to the S IN and AUDIO IN connectors, press numeric key "0" and the AV/S SELECT until [S] appears on the display panel.
  - If connected to the AV1 IN/OUT connector, press numeric key "0" and the AV/S SELECT until "AU 1" appears on the display panel.
  - If connected to the AV2 IN connector, make sure the AV2 SEL switch is set to "AV2 IN", and press numeric key "0" and the AV/S SELECT until "AU 2" appears.

1. Load the source tape in the player, and the recording tape in your recorder.
2. Play back the recording tape and determine the edit-out point (the end of the segment to be replaced) using the Jog/Shuttle controls.
   - Releasing the Jog/Shuttle controls engages the Still mode.
3. Press C. RESET. (0:00:00)
4. Determine the edit-in point (the beginning of the segment to be replaced) using the Jog/Shuttle controls.
5. Press INSERT. (Insert-Pause mode)
   - For simultaneous replacement of the normal audio soundtrack, press A. DUB as well.
   - The TV screen changes from the still picture to the input signal you are going to record.
6. Play back the segment of the source tape to be inserted.
7. Press Play.
   - Insert editing will start. At counter 0:00:00, insert editing will stop automatically while the tape continues running in the Play mode.
   - If you wish to stop insert editing before the specified edit-out point, press C. RESET.

NOTE:
- Suitable leads can be obtained from your dealer.
- Insert editing is not possible with cassettes whose safety tab has been removed.
- Insert editing cannot be started from a non-recorded segment.
- In insert editing, the recording speed (SP/LP) is determined by the previous recording to be replaced. If the previous recording's speed changes within a single edit, the inserted picture will be distorted at the switching point.

Using The Remote Control For TV Operation



TV Code Setting

Your remote control can operate the basic functions of your TV set. In addition to JVC televisions, other manufacturers' televisions listed on the right can also be controlled by setting the remote control to "TV". If your television is a JVC (Code 1), you don't have to set the TV code in step 2.

1. Set the TV/VIDEO switch to "TV".
2. While holding down the OPERATE button, press the numeric keys corresponding to the code number for your TV's brand.
   - Press OPERATE to turn the TV power on.
   - Press TV/VIDEO to switch the TV between TV and VIDEO (or AV) mode.
   - Press TV PROG. to select the TV's channel.
   - Press VOL. to adjust the TV's sound volume.
   - Press Mute to mute the TV's sound.
3. To operate your recorder, set the TV/VIDEO switch back to "VIDEO".

NOTE:
- The TV PROG. button does not function with televisions using Code 2.
- The TV/VIDEO button does not function with televisions using Code 3.
- With some televisions, the OPERATE button functions only to turn the TV power off, and the TV/VIDEO button functions only to switch the TV to the VIDEO (AV) mode.
- Whenever you replace batteries in the remote control, it is necessary to re-set the TV code if your television is not a JVC TV.

IMPORTANT
Although the provided remote control unit is compatible with JVC televisions, as well as many TV models manufactured by others, it is possible that the provided remote control will not work with your TV, or in some instances, will have limited function capability.

CODE	TV BRAND NAME
1	JVC
2	BRANDT, NORDMENDE, SABA, TELEAVIA, TELEFUNKEN, THOMSON
3	FERGUSON
4	PHILIPS
5	BLAUPUNKT, GRUNDIG
6	SONY
7	PANASONIC
0	GRAETZ, ITT, LUXOR, SALORA, SELECO

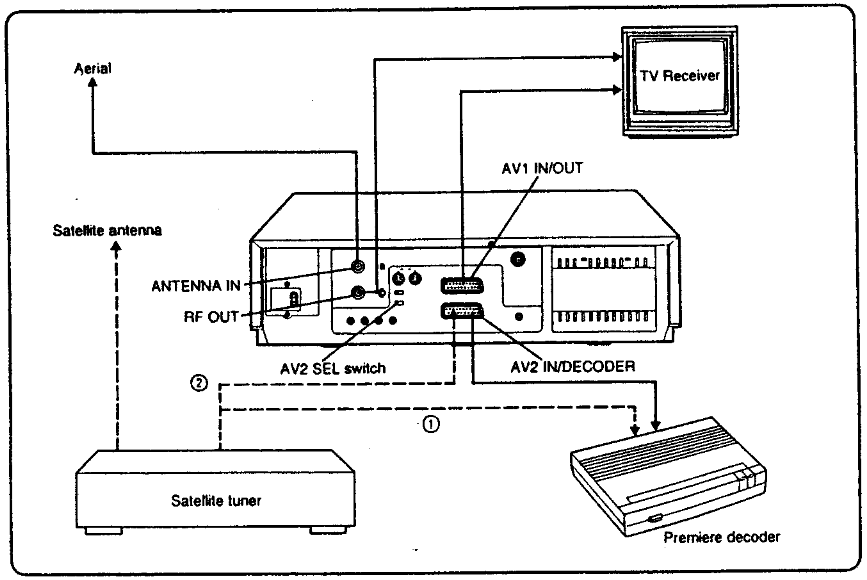
To Control Your Television With Additional Buttons

The numeric keys can also be used to select the TV's channel by setting the remote control to the TV mode.

1. Set the TV/VIDEO switch to "TV".
2. Use the numeric keys and the Digit entry button or the SEARCH <</>> buttons to select the TV's channel.
   - With televisions using Code 1, 3, 4, 6 or 7 the Digit entry button corresponds to the 1-digit/2-digit entry switching button (often labelled -/--) of your TV's remote control.
   - With televisions using Code 1, 5 or 0, the SEARCH << button corresponds to the 10 + button, and the SEARCH >> button, to the 20 + button of your TV's remote control.

NOTE:
The way these buttons are used is determined by your TV. Use these buttons as instructed for your TV's remote control.

Information On "Premiere"



CONNECTIONS

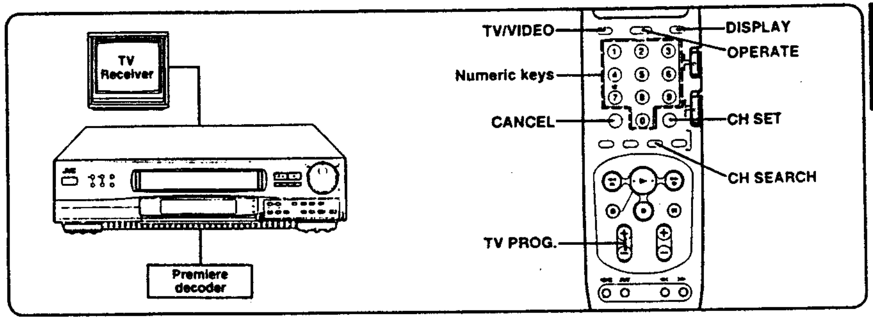
The AV2 IN/DECODER connector can be used as an input terminal for an external Premiere decoder. Simply connect a Premiere decoder and you can enjoy the variety of programming that is available through Premiere.

1. Connect your recorder and TV via their AV connectors (☞ p. 8, AV CONNECTION).
2. Set the AV2 SEL switch on the recorder's rear panel to "DECODER".
3. Connect your recorder's AV2 IN/DECODER connector to the Premiere decoder's Euroconnector using a 21-pin SCART cable.

NOTE:

When connecting a satellite tuner...

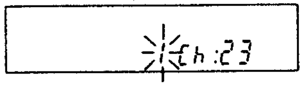
- Connect the satellite tuner to the Premiere decoder ①, or if you don't have a Premiere decoder connect the satellite tuner directly to the vieo recorder ②.
- Set the AV2 SEL switch on the rear panel to "AV2 IN".
- To view a programme via the satellite tuner, select AU 2 mode by pressing numeric key "0" and then AV/S SELECT until "AU 2" appears on the display panel.



TUNING IN PREMIERE CHANNELS

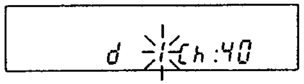
Preparation
- Turn on the TV.
- Select VIDEO channel (or AV mode).

1. **Press OPERATE to turn on the recorder.**
2. **Press TV/VIDEO so that the VIDEO indicator is lit on the display panel.**
3. **Press CH SET.**
4. **Press CH SEARCH to start automatic scanning for receivable channels.**



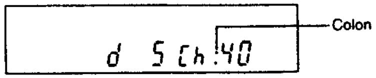
- Automatic scanning stops when a broadcast is detected.
- If the detected broadcast is not a scrambled Premiere broadcast, press CH SEARCH and continue search until a Premiere broadcast is found.

5. **Press TV/VIDEO when a scrambled Premiere broadcast is detected.**



- The programme will be descrambled. For normal (non-scrambled) broadcasts, do not press TV/VIDEO.

6. **Press numeric keys or TV PROG. to select the channel position where you wish to store that Premiere broadcast.**



7. **Press CANCEL to store the channel.**
   - The colon will disappear when the Premiere broadcast is stored.
8. **Press DISPLAY to disengage the Channel Set mode.**

WATCHING PREMIERE

Preparation
- Turn on the TV.
- Select VIDEO channel (or AV mode).

1. Press TV/VIDEO to select the VIDEO mode.
2. Choose a Premiere channel using the Numeric keys or TV PROG. just as you would with regular stations.

Watching One Programme While Recording Another

To watch a regular TV programme while recording a Premiere programme:
- Press the TV PROGRAM button on the TV's remote control and select the channel you want to watch.
- To watch the Premiere programme that is being recorded, press TV/VIDEO and select the VIDEO mode.

To watch a Premiere TV programme while recording a regular programme:
- Press the TV PROGRAM button on the TV's remote control and select the Premiere channel. After displaying a scrambled picture for a few seconds, the programme will become descrambled and a viewable picture will appear on the TV screen.

In Case Of Difficulty

POWER AND TAPE TRANSPORT PROBLEMS

Symptoms	Check points
No power is applied to the recorder.	■ Is the power cord disconnected? — Connect it.
Clock is functioning properly, but the recorder cannot be powered.	■ Is "TIMER" displayed on the display panel? — Press the TIMER button to extinguish the display.
Tape stops during rewind or fast-forward.	■ Is the C. MEMORY button pressed? — Press again to make "M" disappear from the display panel.

RECORDING PROBLEMS

Symptoms	Check points
Recording cannot be started.	■ Is a cassette loaded? ■ Is the safety tab on the cassette removed? — Reseal the slot with adhesive tape.
TV broadcasts cannot be recorded.	■ Has "external input" been selected? — Set to the desired channel.
Tape-to-tape editing is not possible.	■ Is the camcorder or another video recorder correctly connected? ■ Are all necessary power switches turned ON? ■ Has "external input" been selected? — Set to the correct input mode. (☞ p.31).
Camera recording is not possible.	■ Is the camcorder correctly connected? ■ Has "external input" been selected? — Set to the correct input mode. (☞ p.31)
Timer recording is not possible.	■ Have you set the clock correctly and programmed the timer correctly? — Check once again. ■ Is "TIMER" displayed on the display panel? — If not, press the TIMER button to display "TIMER".
ShowView timer recording is not possible, or cannot be done correctly.	■ Have you set GUIDE PROG. numbers into the remote control correctly? (☞ p.20, 21) ■ Did you enter the correct ShowView number for that programme? (☞ p.23)
Satellite programmes are not correctly timer-recorded.	■ Have you connected the satellite tuner to the recorder's AV2 IN/DECODER connector? — If not, make this connection. ■ Have you selected "AU 2" as the channel? — Make sure "AU 2" is selected as the recording channel. (☞ p.24 or 25)

PLAYBACK PROBLEMS

Symptoms	Check points
Playback picture does not appear while the tape is running.	■ If you are using RF OUT connection, is the TV receiver's channel selector set to the correct video channel? — Set it to the RF converter channel (UHF 36). (☞ p.10) ■ If you are using AV connection, is the TV receiver set to the AV mode? — Set it to the AV mode.
Noise appears during visual search.	■ This is normal.
Noise appears during normal playback.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞ p.14)
Noise appears during slow motion playback.	— Try manual tracking. (☞ p.14)
Noise appears during still playback.	— Press Pause/Slow a few times to remove the noise bars from the screen.
Playback picture is blurred or interrupted while TV broadcasts are clear.	■ Video heads may be dirty. — Head cleaning is necessary. Consult your JVC dealer. (☞ p.37)

Hi-Fi AUDIO PROBLEMS

Symptoms	Check points
TV sound cannot be recorded on Hi-Fi audio track.	■ Has the SIMUL button been pressed? — If "SC" appears on the display panel, cancel the Simulcast mode by pressing SIMUL button.
Breaks are noticeable in Hi-Fi audio reproduction.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞ p.14)

OTHERS

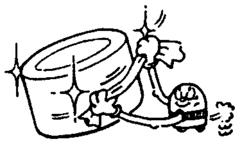
Symptoms	Check points
Whistling or howling is heard from TV during camera recording.	■ Move camcorder or camera's microphone away from TV or reduce TV sound volume.
Channel cannot be switched.	■ Is recording in progress? — Press the Pause/Slow button, change the channel, and press the Play button.
Remote control does not function.	■ Are the batteries discharged? — Replace with new ones. ■ Is the A/B code switch set to the appropriate position? ■ Is the TV/VIDEO code switch to the appropriate position? — Check once again.

ATTENTION:
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and switch on. Take out the cassette. After checking the cassette, operate the unit as usual.

Special Note on Head Cleaning

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Although this model is equipped with a built-in head cleaner which automatically cleans the heads, reducing the likelihood of dirty heads, if such troubles are encountered please consult the nearest JVC dealer.

Auto Head Cleaner



A built-in head cleaner automatically cleans the video heads and head drum whenever a tape is loaded or unloaded to reduce head clogging.

Precautions

Please follow these safety precautions. Not doing so may result in damage to the recorder, remote control, or video cassette.

- **Avoid extreme heat and direct sunlight.**
- **Avoid extreme cold.**
- **Avoid extreme humidity.**
- **Avoid dust.**
- **Avoid places subject to vibrations.**
- **Avoid strong magnetic fields.**
- **Do not block the recorder's ventilation openings.**
- **Do not place anything heavy on the recorder or remote control.**
- **Do not place anything which might spill on top of the recorder or remote control.**
- **Do not place the recorder on cushions, pillows, or thick carpeting.**
- **Use the recorder in a stable, horizontal position only.**

Beware of moisture condensation
Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions — just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder's power turned on for a few hours to let the moisture dry.

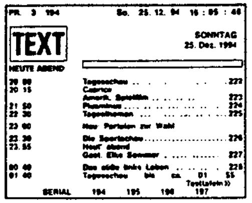
When transporting
- Be sure to remove cassette from recorder before packing.
- Avoid violent shocks to the recorder during packing and transport.

Place cassettes in cassette cases and store vertically.

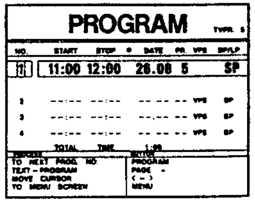
Using The Optional Teletext Adapter

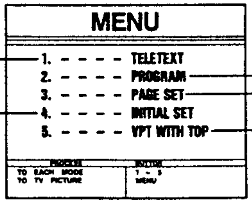
Teletext services have established themselves as one of the most flexible sources of information and broadcast schedules available to TV and video users. Your video recorder is ready to take full advantage of these services. By connecting an optional teletext adapter (☞ Specifications), you'll not only be able to view the vast number of teletext pages now available, you'll be able to transfer broadcast schedule data directly to your recorder's timer for instant, automatic timer programming. You'll also be able to make full use of your remote control's capabilities, with all the dual or triple function controls working as intended. Here are just a few examples of features available to you when you connect an optional teletext adapter.

TELETEXT
- View broadcast teletext pages.
- Several page access modes are available for quick, convenient location of pages you want to see.
- You can program the video recorder's timer directly using TV schedule pages.



PROGRAM
- Check timer recording data on the colour on-screen display.
- Program the timer manually with the remote's numeric keys.





PAGE SET
- You can preset favourite or often-referred-to pages for immediate access.
- Up to four pages can be stored on each of the numeric keys, for a total of 40 pages.

VPT WITH TOP
- TOP automatic teletext timer programming.
- Convenient colour-coded page access.
- "5.– – – – VPT WITH TOP" only appears when the video recorder's tuner is tuned to a station transmitting TOP broadcasts. (Applicable only in certain areas.)

INITIAL SET
LANGUAGE
- Select one of four languages (English, German, Italian, or Swedish) for on-screen messages.

CLOCK ADJUST
- Set the recorder's clock manually using the numeric keys.
- Set the recorder's clock automatically by reading teletext time information.

SECTION 1
DISASSEMBLY

1.1 DISASSEMBLY

1.1.1 Top cover

1. Take out four screws Ⓐ.
2. Slide the side panels (L) and (R) in directions ① and ②, and remove them. (Only use for HR-S6900EG)
3. Take out one screw Ⓑ.
4. Tilt up the rear end of the top cover in direction ③, then remove the top cover.

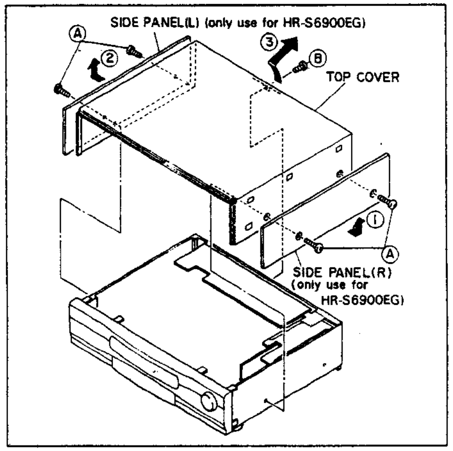

SIDE PANEL(L) (only use for HR-S6900EG)
Ⓐ
②
③
Ⓑ
TOP COVER
①
Ⓐ
SIDE PANEL(R) (only use for HR-S6900EG)

Fig. 1-1 Top cover

1.1.2 Front panel assembly

1. Remove the top cover.
2. Carefully disengage four tabs ⓐ of the panel assembly from the upper side of the chassis in direction ①.
3. Disengage two tabs ⓑ of the both side of front panel assembly and disengage three tabs ⓒ from bottom of the chassis.
4. Disconnect one connector ⓓ and pull the front panel assembly to forward direction.

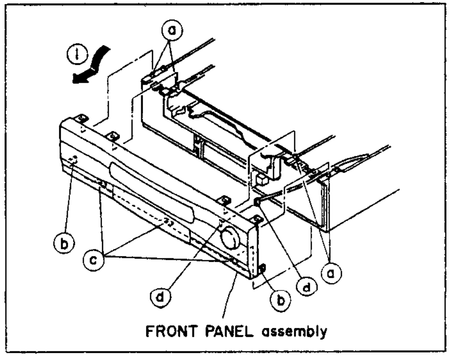

ⓐ
①
ⓑ
ⓒ
ⓓ
ⓑ
ⓓ
ⓐ
FRONT PANEL assembly

Fig. 1-2A Front panel assembly

Note: ***Install the front panel assembly as shown in Fig. 1-2B and reengage the tabs.***
Supply power and use a spare cassette to check for normal loading and eject operations.

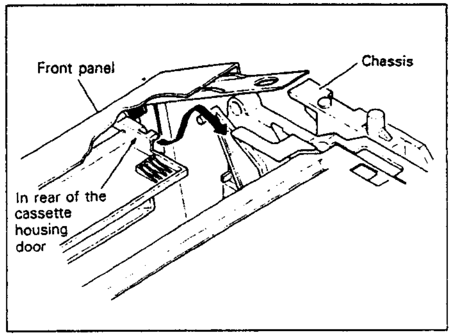

Front panel
Chassis
In rear of the cassette housing door

Fig. 1-2B Cassette housing door

1.1.3 Bottom cover

1. Remove the top cover.
2. Take out two screws Ⓒ.
3. Disengage three tabs ⓐ, slide the bottom cover in direction ① and remove the bottom cover.

Note: ***Install the bottom cover and reengage three tabs ⓐ, then tighten two screws Ⓒ.***

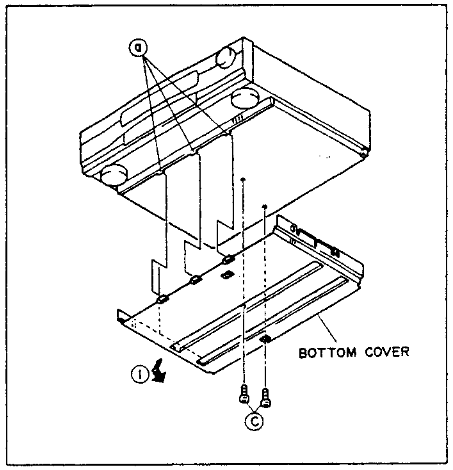

ⓐ
BOTTOM COVER
①
Ⓒ

Fig. 1-3 Bottom cover

1.1.4 TU/DEM/P/V board assembly

1. Remove the top cover.
2. Take out four screws Ⓓ.
3. Take out five screws Ⓔ and tilt up the TU/DEM/P/V board assembly in direction ① and remove it.

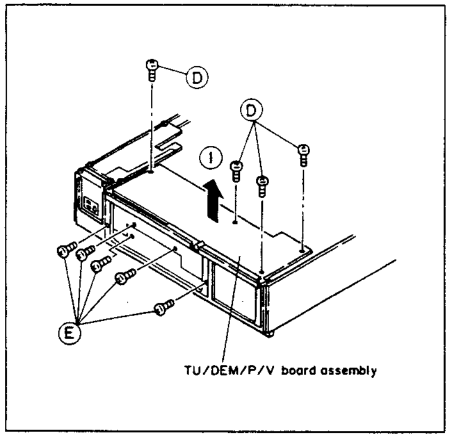

Ⓓ
Ⓓ
①
Ⓔ
TU/DEM/P/V board assembly

Fig. 1-4A TU/DEM/P/V board assembly-1

4. For check and repairs, set up the TU/DEM/P/V board assembly to rear of chassis at ⓐ positions as shown in Fig. 1-4B.

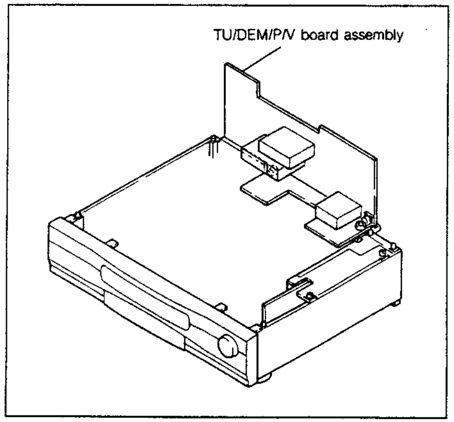

TU/DEM/P/V board assembly

Fig. 1-4B TU/DEM/P/V board assembly-2

1.1.5 SWITCHING REGULATOR board assembly

1. Remove the top cover.
2. Take out four screws Ⓕ, tilt up the SWITCHING REGULATOR board assembly in direction ① and remove it.

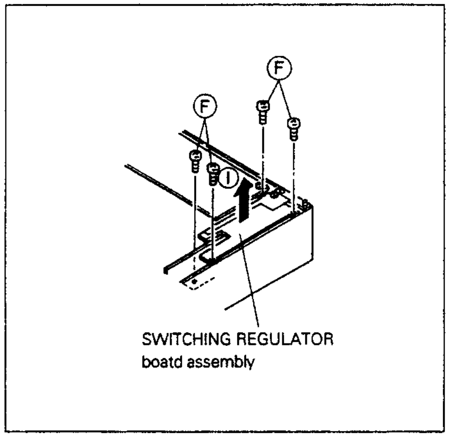

Ⓕ
Ⓕ
①
SWITCHING REGULATOR
boatd assembly

Fig. 1-5 SWITCHING REGULATOR board assembly

1.1.6 PRE/REC board assembly

1. Remove the top cover and TU/DEM/P/V board assembly.
2. Take out a screw Ⓖ' then remove the shield.
3. Take out two screws Ⓖ.
4. Disconnect connectors CN201, CN1, CN2 and CN3 from the PRE/REC board assembly.
5. Remove the PRE/REC board assembly.

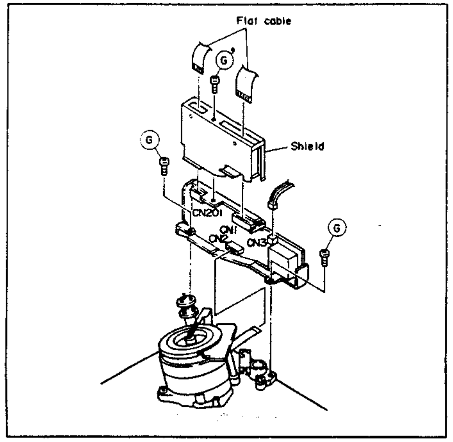

Flat cable
Ⓖ
Ⓖ
Shield
CN201
CN1
CN2
CN3
Ⓖ

Fig. 1-6 PRE/REC board assembly

1.1.7 DISPLAY board assembly and SWITCH/JACK board assembly

1. Remove the top cover and front panel assembly.
2. Disconnect one connector ⓐ.
3. Disengage four tabs ⓑ and remove DISPLAY board assembly.
4. Disengage two tabs ⓒ and remove SWITCH/JACK board assembly.

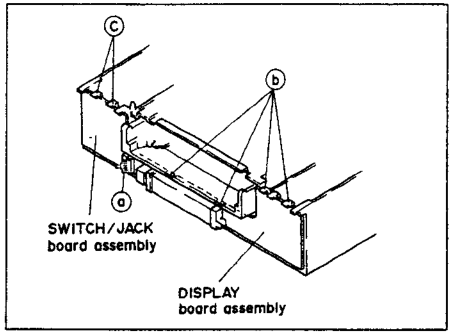

ⓒ
ⓑ
ⓐ
SWITCH/JACK
board assembly
DISPLAY
board assembly

Fig. 1-7 DISPLAY board assembly and SWITCH/JACK board assembly

1.1.8 Main deck assembly

1. Remove top cover, front panel assembly, DISPLAY board assembly and SWITCH/JACK board assembly.
2. Disconnect five connectors ⓐ.
3. Take out one screw Ⓗ, two screws Ⓙ and two screws Ⓚ.
4. Tilt up the main deck assembly in direction ① and remove it.

Notes:

- ***For check the bottom side of main deck assembly, take out screws Ⓗ, Ⓙ and Ⓚ, and set up the front side of chassis as shown in Fig. 1-8B.***
- ***Install the main deck assembly, use care not to damage flat wires and put the wiring correctly. If these are incorrect, the mode motor will not rotate properly.***

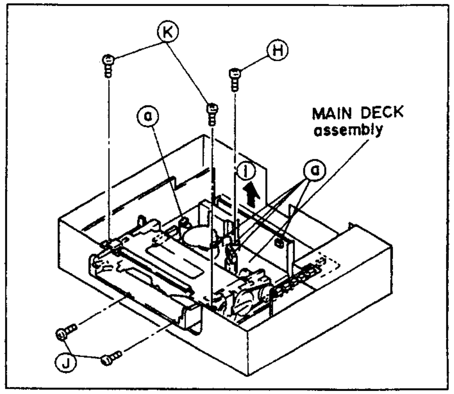

Ⓚ
Ⓗ
ⓐ
MAIN DECK
assembly
ⓐ
①
Ⓙ

Fig. 1-8A Main deck assembly-1

5. For checks and repairs, set up the main deck assembly to front of chassis as shown in Fig 1-8B

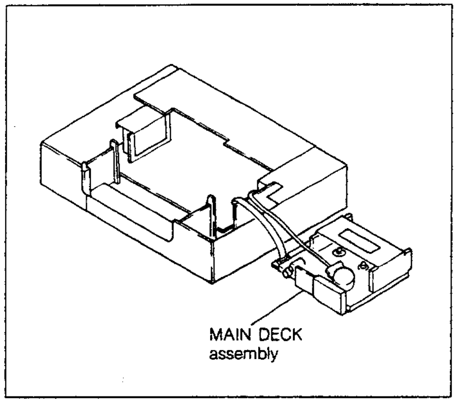

MAIN DECK
assembly

Fig. 1-8B Main deck assembly-2

1.1.9 DECK TERMINAL board assembly

1. Remove the top cover and main deck assembly.
2. Take out four screws Ⓛ.
3. Remove the capstan belt and washer.
4. Disconnect one connector ⓐ, disengage two tabs ⓑ, and remove the DECK TERMINAL board assembly.

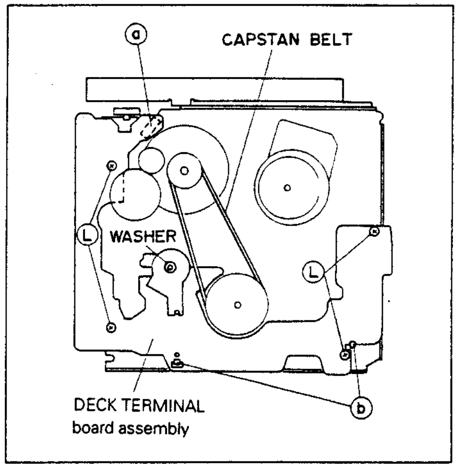

ⓐ
CAPSTAN BELT
Ⓛ
WASHER
Ⓛ
DECK TERMINAL
board assembly
ⓑ

Fig. 1-9 DECK TERMINAL board assembly

1.1.10 Cassette housing assembly

Note: ***When install or remove the cassette housing assembly, be sure set the Eject position of mechanism condition.***

1. Remove the top cover and front panel assembly.
2. Take out two screws Ⓜ and two screws Ⓝ, tilt up the cassette housing assembly in direction ①.
3. Disengage two tabs ⓐ and remove the cassette housing assembly.

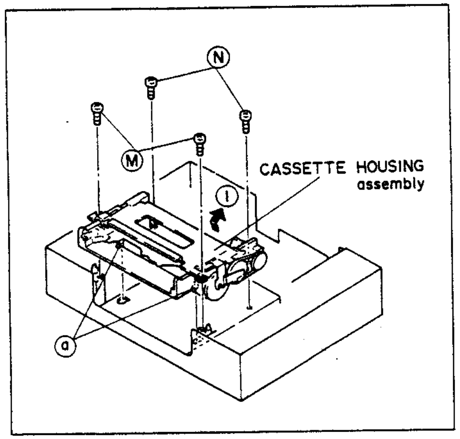


Fig. 1-10 Cassette housing assembly

1.1.11 MAIN board assembly

1. Remove the top cover, front panel assembly, TU/DEM/P/V board assembly, main deck assembly and cassette housing assembly.
2. Take out four screws Ⓟ, tilt up the MAIN board assembly in direction ① and remove it.

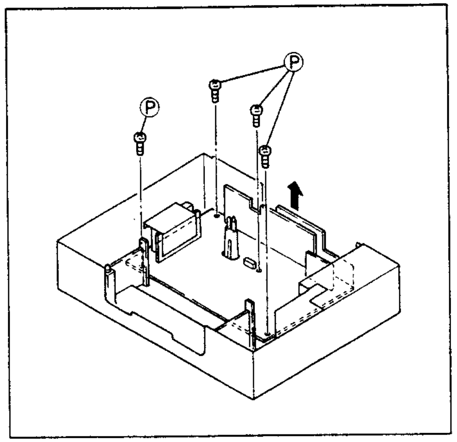


Fig. 1-11 MAIN board assembly

SECTION 2
MECHANISM ADJUSTMENT

2.1 PREPARATION

2.1.1 Precautions

1) Disconnect VCR from AC power before soldering.
2) Avoid imparting stress to wires when disengaging connectors.
3) Determine and correct the cause of difficulty before proceeding to adjustments. Do not disturb settings unnecessarily.
4) Use care not to damage tabs, claws, etc. during repairs.
5) Install the cassette housing assembly only when the mechanism is in the Eject or Stop mode position. In the Eject mode, the internal holder of the housing is fully raised. This is fully lowered in the Stop mode.
6) When installing the front panel assembly, be sure to engage the housing door with the door lever of the cassette housing assembly. If this is omitted, the door will not open at Eject and the cassette cannot be removed.
   See Sec.1 DISASSEMBLY.

2.1.2 Check without cassette housing

Mechanism operations can be observed easily by removing the cassette housing assembly. Note the following.

1) Disconnect the power cord from the AC outlet, and remove the top cover, the front panel and the cassette housing assembly in this order.
2) Disable the photo transistor sensor (END SENSOR, START SENSOR) on the main-deck by applying an opaque cover.
3) Set the CASSETTE switch (push switch) to ON.
4) Release the LED guide from the hook while removing it.
5) Connect the pwer cord to the AC outlet and turn on the POWER switch. Select the desired operation modes with the operation buttons or remote control unit. However, notice that without tape, setting for the RWD or FF direction modes produces the Stop mode after a few seconds later and power supply is cut off due to absence of the reel sensor output.

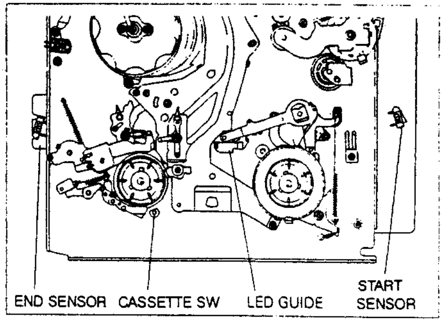


Fig. 2-1-1 Checking without cassette housing

2.1.3 Manual removal of loaded tape

In event of failure which leaves the tape in the loaded position, remove it by the following procedure.

1) Disconnect the power cord from the AC outlet, and remove the top cover and the front panel in this order.
2) Turn the loading motor on the main deck by hand in the direction of the arrow to unload the tape. At that time, pay careful attention to the tape not to get soiled with grease.
3) Remove the cassette housing assembly.
4) Ture the reel of the cassette tape to take in the slack of the tape. During this work, hold down the cassette tightly by hand, otherwise it may damage the tape.
5) Take off the cassette from the cassette housing.

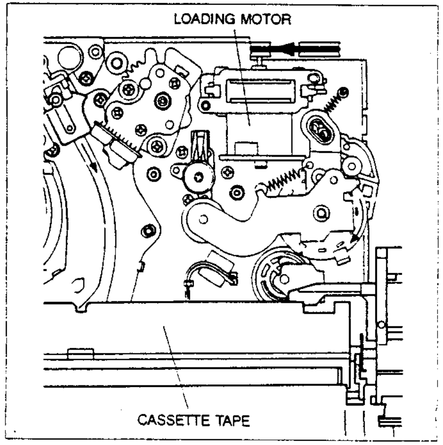


Fig. 2-1-2 Manual removal of loaded tape

2.1.4 Test equipment

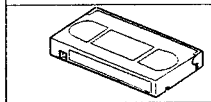
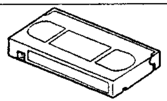
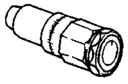
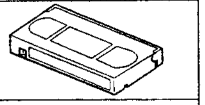
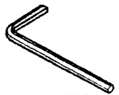
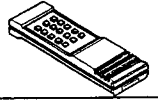
Alignment tape (SP) MH-2	Alignment tape (LP) MH-2L	Torque gauge PUJ48075-2	Back tension cassette gauge PUJ48076-2
			
A/C head positioning tool PTU94010	Line head wrench PGJ04033-2	Presetting unit PTU94008	
			

Table 2-1-1

2.2 MAIN MECHANISM PARTS

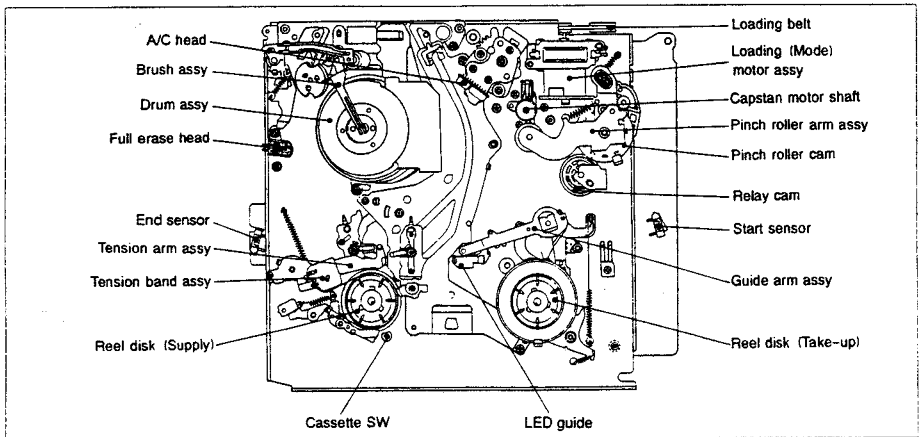

A/C head
Brush assy
Drum assy
Full erase head
End sensor
Tension arm assy
Tension band assy
Reel disk (Supply)
Loading belt
Loading (Mode) motor assy
Capstan motor shaft
Pinch roller arm assy
Pinch roller cam
Relay cam
Start sensor
Guide arm assy
Reel disk (Take-up)
Cassette SW
LED guide

Fig. 2-2-1 Top view of main-deck

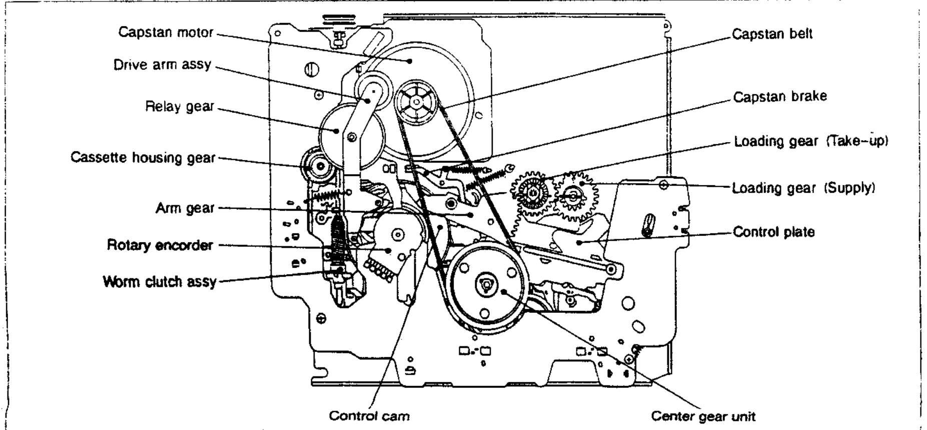

Capstan motor
Drive arm assy
Relay gear
Cassette housing gear
Arm gear
Rotary encorder
Worm clutch assy
Capstan belt
Capstan brake
Loading gear (Take-up)
Loading gear (Supply)
Control plate
Control cam
Center gear unit

Fig. 2-2-2 Bottom view of main-deck

2.2.1 Cleaning

Periodic cleaning of the tape transport system is desirable, but ordinarily not feasible in practice. Therefore, perform cleaning when a set is brought in for repairs or maintenance. Contamination of the video heads, tape guides and brushes can detract from playback picture quality and in extreme cases, even damage the tape. For cleaning, use a fine-mesh cotton cloth (about the texture of a white dress-shirt) moistened in alcohol.

- To clean the video heads, press the moistened cloth gently against the upper drum with finger-tip and turn the drum by hand.
- Do not use a vertical stroke, as this may damage the heads.

2.2.2 Lubrication

Oil and grease do not normally require periodic replenshing. Apply only when replacing lubricated parts (also clean and replace lubrication of mating parts if soiled).
For parts and points to apply oil and grease, refer to the exploded views of the mechanism assembly.
Before oiling, clean with alcohol.
Apply one or two drops of oil.
Avoid excess oil.

1) Table 2-2-1 indicates the oil and grease used in this set. Use these or recommended locally available equivalents.

Category	Part No.
Oil	COSMO-HV56
Grease	KANTO-G-31KAV

Table 2-2-1

2) Grease is not required for a replacement cassette housing assembly, as this has been applied at the factory.

Note: *Stir grease that has been stored for an extended period.*

2.3 INSPECTION AND MAINTENANCE

This product employs rotary and moving parts which wear out in the course of usage. Periodic inspection, cleaning, lubrication and maintenance are therefore important for ensuring maximum performance. Worn parts must also be replaced at when required.

2.3.1 Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary.
Also note that rubber parts may deform in time, even if the set is not used.

System	Parts Name	Operation hours						
		250	500	750	1000	1250	1500	2000
Tape Transport	Upper drum assy	★	★	★	○	★	○	○
	A/C head	★			○			○
	Pinch roller arm assy	★	★	★	★	★	★	★
	Full erase head							
	Tension arm assy							
	Lower drum motor assy							
	Capstan motor (Shaft)							
Drive	Capstan motor							○
	Capstan belt			○				○
	Mode motor assy							○
	Loading belt			○				○
	Reel disk (Supply)							○
	Reel disk (Take-up)							○
	Clutch assy							○
	Worm clutch assy							○
Brake	Sub brake assy			○				○
	Main brake assy			○				○
	Sub brake			○				○
	Tension band assy							○
Others	Brush assy			★				○
	Tension band assy							○

★ : Cleaning
○ : Inspection or Replacement if necessary

Table 2-3-1

2.4 MECHANISM DISASSEMBLY & INSTALLATION

2.4.1 Disassembly of Mechanism

1. Precaution before disassembling mechanism

This mechanism has an exclusive operation mode provided for disassembling and installation of the mechanism, and it is suggested to set the mechanism to this mode before disassembly and installation. The exclusive mechanism operation mode is not generally used and becomes available by manual setting only.

Note: *Although the mechanism can be disassembled when it is set in the EJECT mode, it is recommended that you set it to the exclusive mechanism operation mode.*

2. Setting of exclusive mechanism operation mode

Turn the Pinch Roller Cam clockwise as viewed from the upper side so as to rotate the Loading Motor in the direction of the arrow, while adjusting positions of the Pinch Roller Cam and the Relay Cam so that their markings coincide with each other as shown in Fig. 2-4-2.
At that time, both the pole bases should be moved to the full extent in the direction of the Reel Base Assembly (supply side).

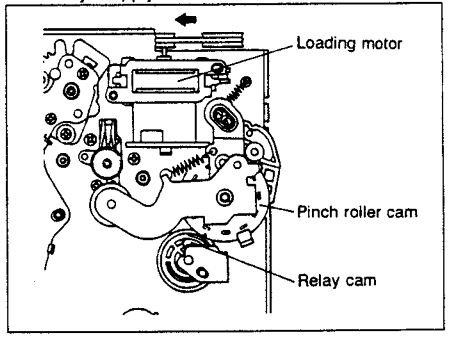


Fig. 2-4-1

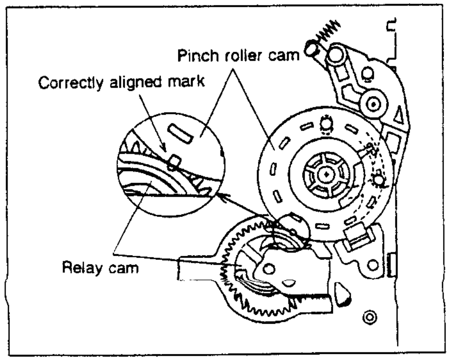


Fig. 2-4-2

3. Disassembling of the lower mechanism assembly

1) Unsolder the Rotary Encoder from the DECK TERMINAL board (at five points) and remove the slit washer (1'). Release the Rotary Encoder from the hooks in the both sides while removing it for replacing.
When the Rotary Encoder is not being replaced, remove the slit washer only and take off the Rotary Encoder which is soldered to the DECK TERMINAL board.
2) Remove the tension spring (2") and the slit washer (2') while taking off the Drive Arm Assembly.
3) Remove the Relay Gear.

No.	Part name
1	Rotary encoder
1'	Slit washer
2	Drive arm assembly
2'	Slit washer
2"	Tension spring
3	Relay gear

Table 2-4-1

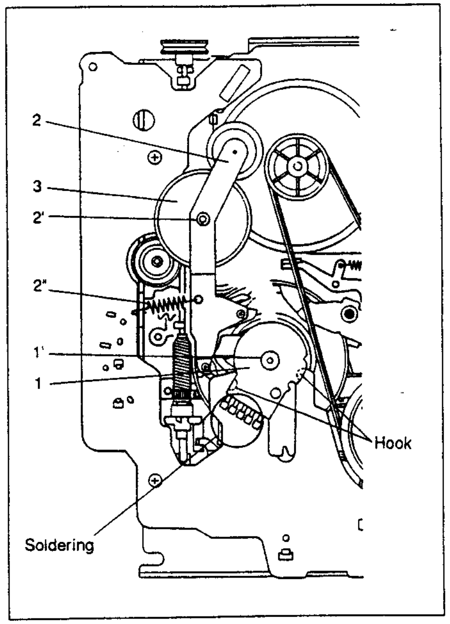


Fig. 2-4-3

4) Disengage the CAPSTAN belt.
5) Remove the 4 screws (5'), disconnect the connector (CN2), and disengage the 2 hooks. Then remove the DECK TERMINAL board.

No.	Part name
4	Belt
5	Deck terminal board assembly
5'	Screws (x4)
5"	Connector (CN2)

Table 2-4-2

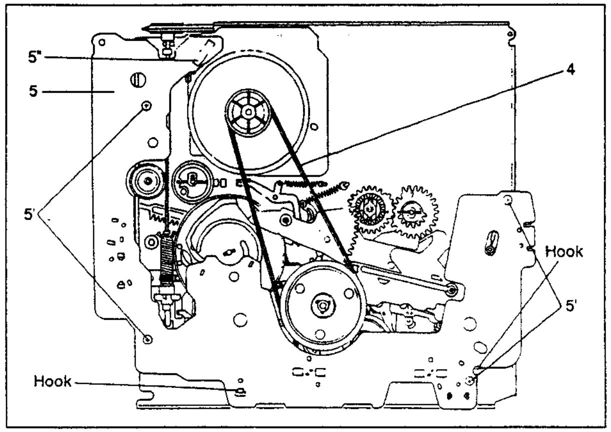


Fig. 2-4-4

6) Remove the slit washer (6') while taking off the Arm Gear.
7) Expand the two center hooks outwards while removing the Control Cam. Carefully do this work not to damage the hooks.
8) Remove the slit washer (8') and the Center Gear Unit.
9) Disengage the loading belt, and release the Worm Clutch Assembly from the 3 hooks while taking it off. Carefully do this work not to damage the hooks.
10) Remove the slit washer (10') and the Control Plate.

No.	Part name
6	Arm gear
6'	Slit washer
7	Control cam
8	Center gear unit
8'	Slit washer
9	Worm clutch assembly
9'	Belt
10	Control plate
10'	Slit washer

Table 2-4-3

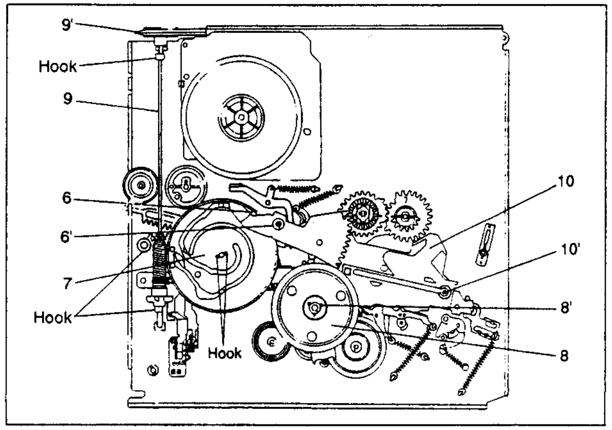


Fig. 2-4-5

11) *Disengage the tension spring (11') and re*move the Capstan Brake.
12) Disengage the tension spring (12') at one end, and release the Slide Plate from the two hooks while taking it off.
13) Remove the slit washer (13') and the Cassette Housing Gear.
14) Spread out the center hook of the Relay Cam with care not to damage the hook, and remove the Relay Cam.
15) Pull out the S-switch (S-VHS) pin, which requires careful attention not to lose it because it becomes free when the DECK TERMINAL board is removed.
16) Set the Slide Base Assembly free, then move it upwards while removing it.
17) Remove the Reset Lever.
18) Remove the Idler Unit.
19) Disengage the tension spring (19') at one end, and remove the Idler Cancel Lever.
20) Remove the slit washer (20') of the Clutch Gear Unit (TU side) and take it off.
21) Remove the slit washer (21') of the Clutch Gear Unit (SUP side) and take it off.
22) Expand the two outer hooks in the center of the Loading Gear (TU side) and take off the Loading Gear. Carefully do this work not to damage the hooks.
23) Remove 1 screw (23') and the arm of the Loading Gear Assembly (SUP side), and release the Loading Gear Assembly (SUP) from the 2 hooks by expanding them while taking it off in the free status. During this work, pay careful attention to the hooks not to damage them.
24) Disengage the tension spring (24') at one end and escape the Main Brake Assembly from the center hook while taking it off.
25) Disengage the tension spring (25') at one end and take off the Take-up Lever.
26) Disengage the tension spring (26') at one end and escape the Off Lever Assembly from the center hook while taking it off.
27) As the Slider Assembly on the upper side of the deck is removed, disengage the tension spring (27') and expand the center hook while taking off the Tension Lever Assembly.
28) Disengage the tension spring on the upper side of the deck, and mode the spring base upwards to remove it.
29) **Remove the 3 screws from the upper side of the deck, release the Capstan Motor from the 2 hooks on the lower part of the deck while taking off the motor.**

No.	Part name
11	Capstan brake assembly
11'	Tension spring
12	Slide plate
12'	Tension spring

Table 2-4-4

No.	Part name
13	Cassette housing gear
13'	Slit washer
14	Relay cam
15	S-SW pin (S-VHS)
16	Slide base assembly
17	Reset lever
18	Idler unit
19	Idler cancel lever
19'	Tension spring
20	Clutch gear unit (TU)
20'	Slit washer
21	CLutch gear unit (SUP)
21'	Slit washer
22	Loading gear (TU)
23	Loading gear assembly (SUP)
23'	Screw
24	Main brake assembly (SUP)
24'	Tension spring
25	Take-up lever
25'	Tension spring
26	OFF lever assembly
26'	Tension spring
27	Tension lever assembly
27'	Tension spring
28	Spring base
29	Capstan Motor

Table 2-4-5

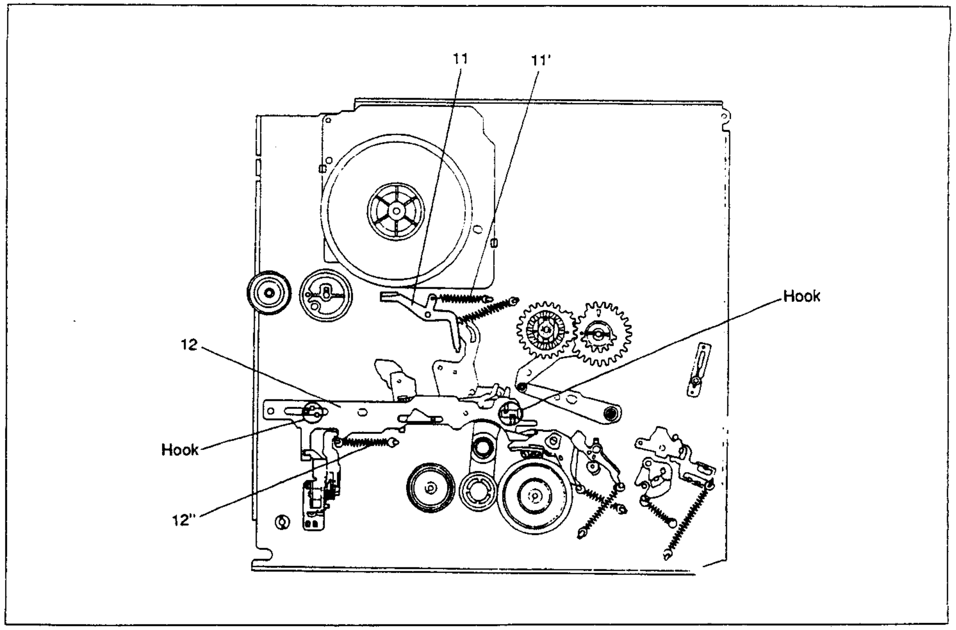


Fig. 2-4-6

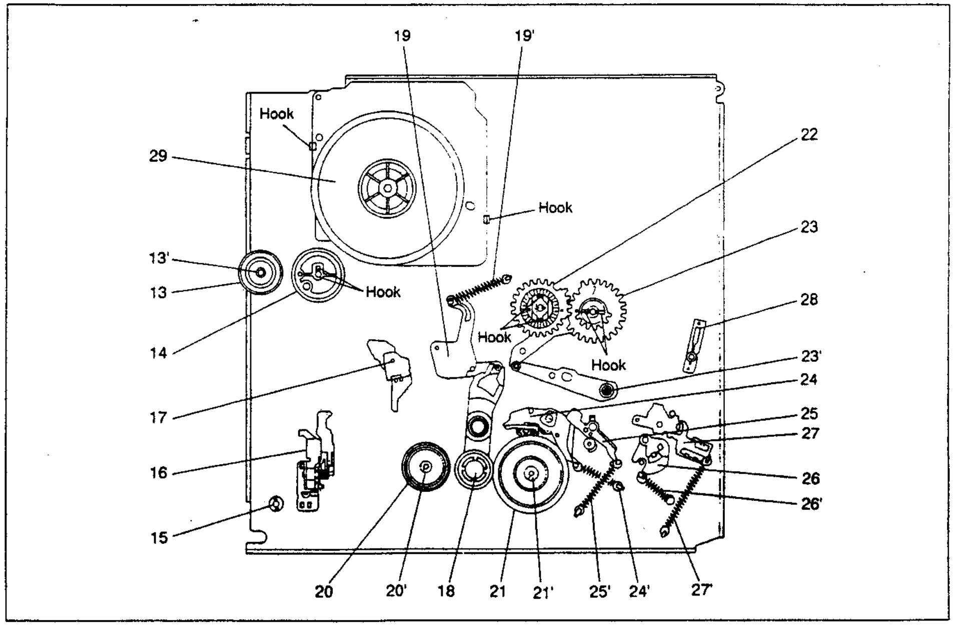


Fig. 2-4-7

4. Disassembling of the upper mechanism assembly

1) Remove the slit washer (1'), the Pinch Roller Arm Assembly and the compression spring (1") in this order.
2) Release the Pinch Roller Cam from the hook while taking it off.
3) Disengage the compression spring (3') and take off the Pinch Roller Lever.

No.	Part name
1	Pinch roller arm assembly
1'	Slit washer
1"	Compression spring
2	Pinch roller cam
3	Pinch roller lever
3'	Compression spring

Table 2-4-6

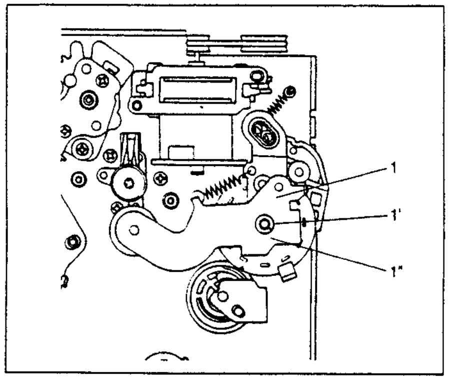


Fig. 2-4-8

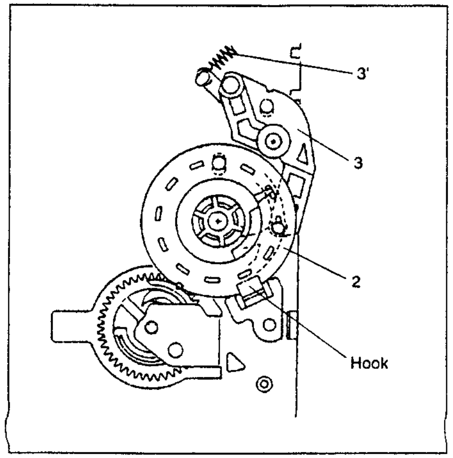


Fig. 2-4-9

2.4.2 Installation of mechanism

1. Precaution before reassembling mechanism

Check that all the mechanism parts on the upper side of the deck are set in the exclusive mechanism operation mode.

2. Installation of lower mechanism assembly parts

1) Install the Capstan Motor and tighten it with 3 screws from the upper side of the deck.
2) Install the Spring Base and engage the tension spring on the upper side of the deck.
3) Install the Tension Lever Assembly and engage the tension spring (3').
4) Install the Off Lever Assembly and engage the tension spring (4').
5) Install the Take-up Lever and engage the tension spring (5').
6) Install the Main Brake (SUP side) and engage the tension spring (6').
7) Install the Loading Gear Assembly (SUP side) and fix the arm and the Pole Base Assembly with a screw (7').
8) Confirm the mechanism mode that is set to the exclusive mechanism operation mode, and install the Loading Gear (TU side) with the hole aligned with the hole on the Loading Gear Assembly (SUP side) as the Tension Arm is returned to the front side.
9) Install the Clutch Gear (SUP side) and the slit washer (9') with care not to contact with the Main Brake.
10) Install the Clutch Gear Unit (TU side) and the slit washer (10').
11) Install the Idler Cancel Lever and engage the tension spring (11').
12) Install the Idler Unit.
13) Install the Reset Lever.
14) Install the Slide Base Assembly while re-engaging the tension spring on the upper side of the deck.
15) Install the S-switch (S-VHS) pin.
16) Install the Relay Cam with the hole aligned with hole on the chassis.
17) Install the Cassette Housing Gear and the slit washer (17').

No.	Part name
1	Capstan Motor
2	Spring base
3	Tension lever assembly
3'	Tension spring
4	OFF lever assembly
4'	Tension spring
5	Take-up lever
5'	Tension spring
6	Main brake assembly (SUP)
6'	Tension spring
7	Loading gear assembly (SUP)
7'	Screw
8	Loading gear (TU)

Table 2-4-7

No.	Part name
9	Clutch gear unit (SUP)
9'	Slit washer
10	Clutch gear unit (TU)
10'	Slit washer
11	Idler cancel lever
11'	Tension spring
12	Idler unit
13	Reset lever
14	Slide base assembly
15	S-SW pin (S- VHS)
16	Relay cam
17	Cassette housing gear
17'	Slit washer

Table 2-4-8

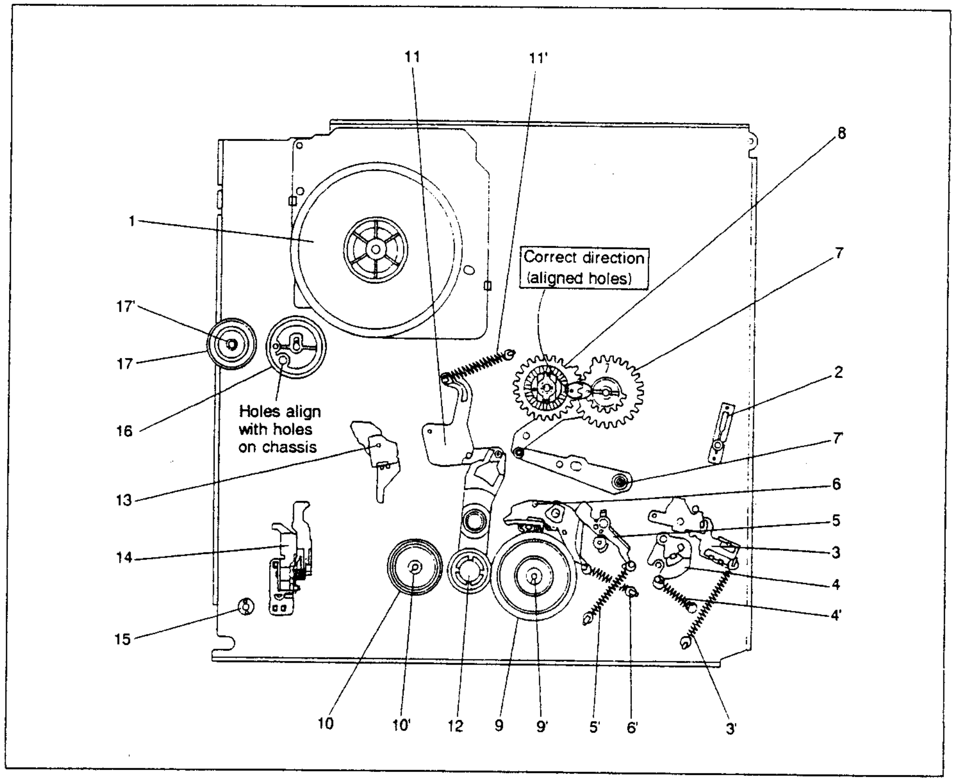


Fig. 2-4-10

18) Install the Slide Plate with the lower stud of the Main Brake (TU side) set in the groove, and engage the tension spring (18'). Set the Slide Plate on the deck with the hole aligned with the hole on the chassis in the stage to install the mechanism parts on the upper side of the deck.

Note: *If the Slide Plate is pulled to the phase adjusting position in the above mentioned state, the Main Brake (SUP side) catches the tip of Slide Plate and it is locked accordingly. Do not continue reassembling of the mechanism parts in this condition to prevent the Slide Base Assembly from getting damaged.*

19) Install the Capstan Brake Assembly and engage the tension spring (19').

No.	Part name
18	Slide plate
18'	Tension spring
19	Capstan brake assembly
19'	Tension spring

Table 2-4-9

20) Push the Take-up Lever with the two holes alinged with the holes on the chassis (see Fig. 2-4-12). In this condition install the Control Plate and the slit washer (20').

21) Install the Worm Clutch Assembly and engage the belt (for the Mode Motor) between the Worm Assembly and the Loading Motor.

No.	Part name
20	Control plate
20'	Slit washer
21	Worm clutch assembly
21'	Belt

Table 2-4-10

22) Push the Idler Cancel Lever while installing the Center Gear Unit and the slit washer (22') (see Fig. 2-4-13) with careful attention to the studs of the Idler Cancel Lever and the chassis so that both the studs are correctly set in the upper and the lower grooves of the Center Gear Unit respectively.

23) Install the Control Cam with the hole aligned with hole on the chassis. At that time, the stud in the tip of the Slide Base Assembly must be exactly set in the outer groove of the Control Cam.

No.	Part name
22	Center gear unit
22'	Slit washer
23	Control cam

Table 2-4-11

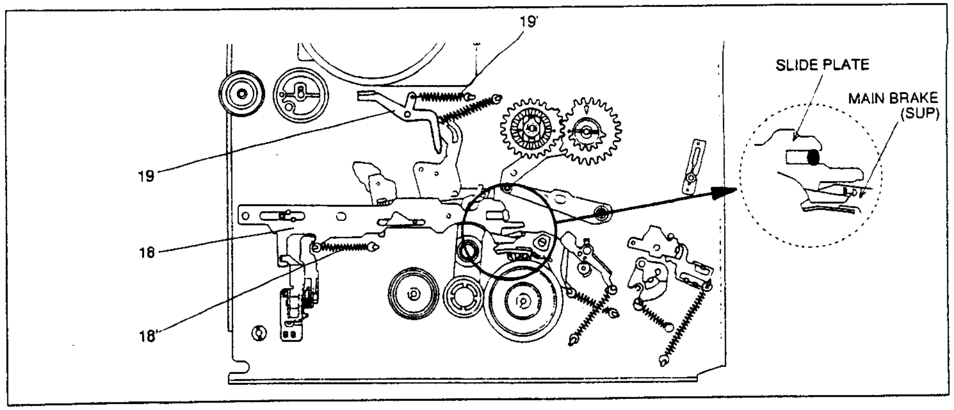
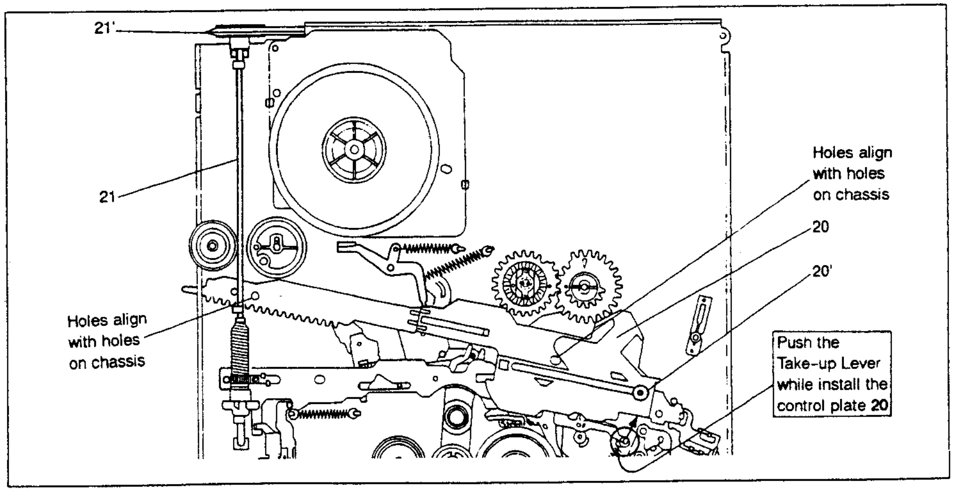
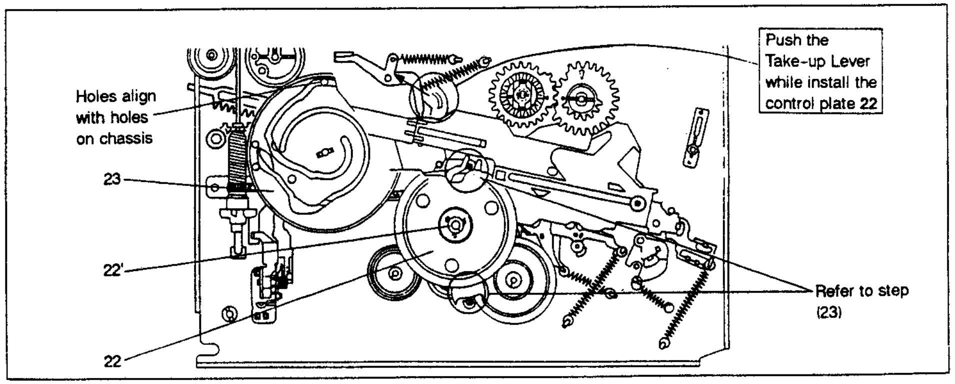


Fig. 2-4-11



Push the Take-up Lever while install the control plate **20**

Fig. 2-4-12



Push the Take-up Lever while install the control plate **22**

Refer to step (23)

Fig. 2-4-13

24) Install the Arm Gear with the hole aligned with the hole on the Loading Gear (TU side) while securing it with the slit washer (24'). At that time, make sure to set the stud of the Arm Gear in the groove of the Control Cam exactly.

No.	Part name
24	Arm gear
24'	Slit washer
24"	Tension spring

Table 2-4-12

25) When installing the DECK TERMINAL board, proceed in the following order; connect CN2, engage 2 hooks, and tighten the board with 4 screws (25').
When the Rotary Encoder is soldered to the DECK TERMINAL board, confirm that the hole of the Rotary Encoder is correctly positioned first, then install the DECK TERMINAL board and the slit washer.

26) Engage the belt (for the Capstan Motor) between the Capstan Motor and the Center Gear Unit.

No.	Part name
25	Deck Terminal board
25'	Screws (x 4)
25"	Connector (CN2)
26	Belt

Table 2-4-13

27) Install the Relay Gear.

28) Install the Drive Arm Assembly, slit washer (28'), and engage the tension spring (28").

29) Install the Rotary Encoder after confirming that the hole is correctly positioned, engage the slit washer (29') and solder the Rotary Encoder.

No.	Part name
27	Relay gear
28	Drive arm assembly
28'	Slit washer
28"	Tension spring
29	Rotary encoder
29'	Slit washer

Table 2-4-14

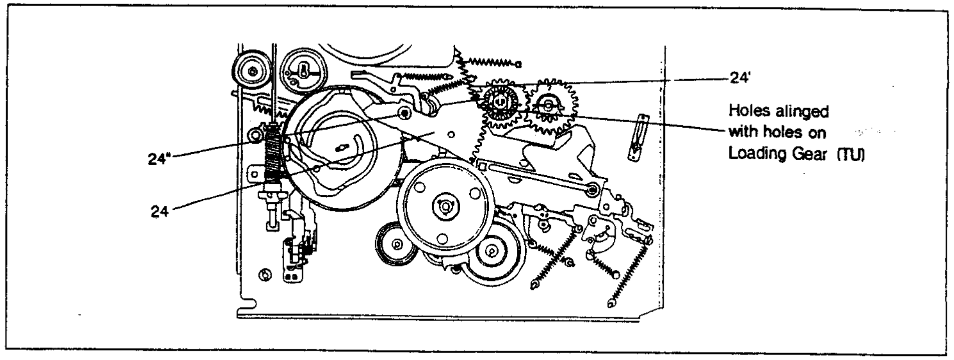


Fig. 2-4-14

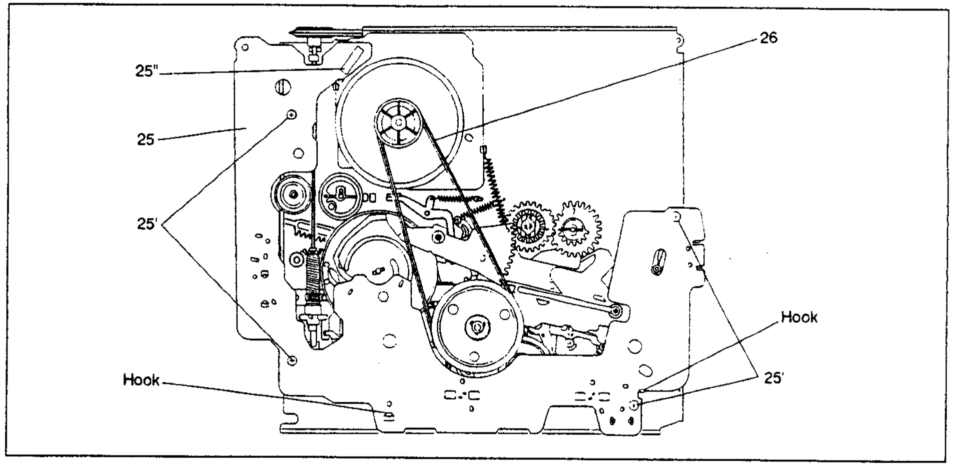


Fig. 2-4-15

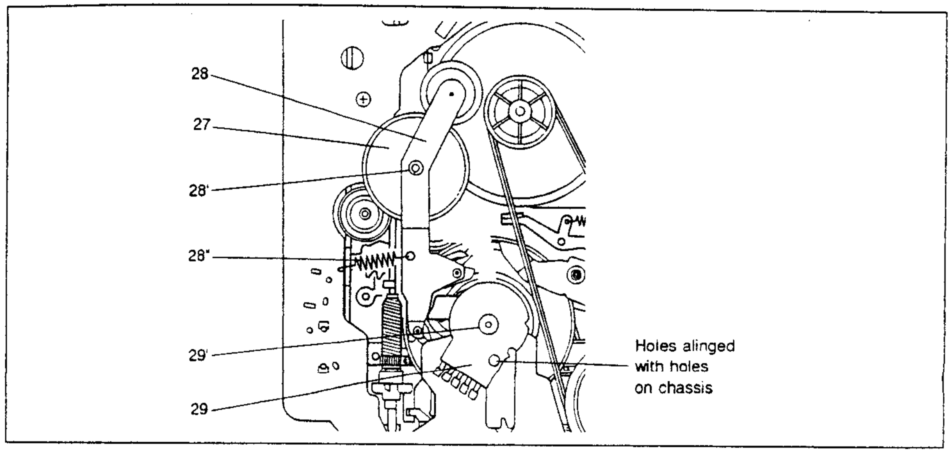


Fig. 2-4-16

2. Reassembling upper mechanism assembly parts

1) Install the Pinch Roller Lever and engage the tension spring (1').
2) Install the Pinch Roller Cam so that the marking matches with that of the Relay Cam. At that time, the two holes of the Pinch Roller Cam and the chassis should not match completely with each other but overlap by half as shown in the figure below.
3) Set in the compression spring (3") and install the Pinch Roller Arm Assembly so that the stud of the Pinch Roller Lever is positioned in the elliptical groove of the Pinch Roller Assembly, then engage the slit washer (3').

No.	Part name
1	Pich roller lever
1'	Tension spring
2	Pinch roller cam

Table 2-4-15

No.	Part name
3	Pinch roller arm assembly
3'	Slit washer
3"	Compression spring

Table 2-4-16

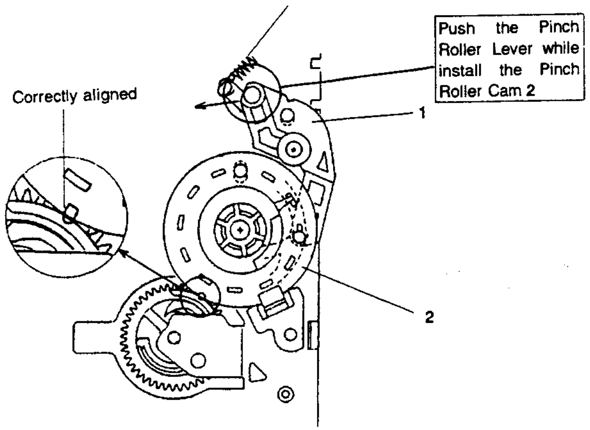

Push the Pinch Roller Lever while install the Pinch Roller Cam 2
Correctly aligned
1
2

Fig. 2-4-17

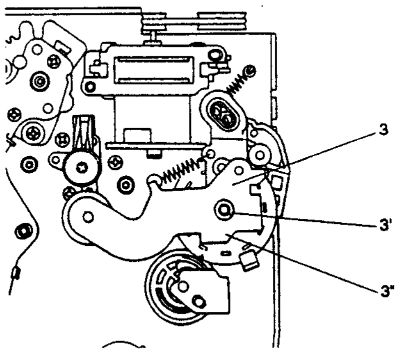


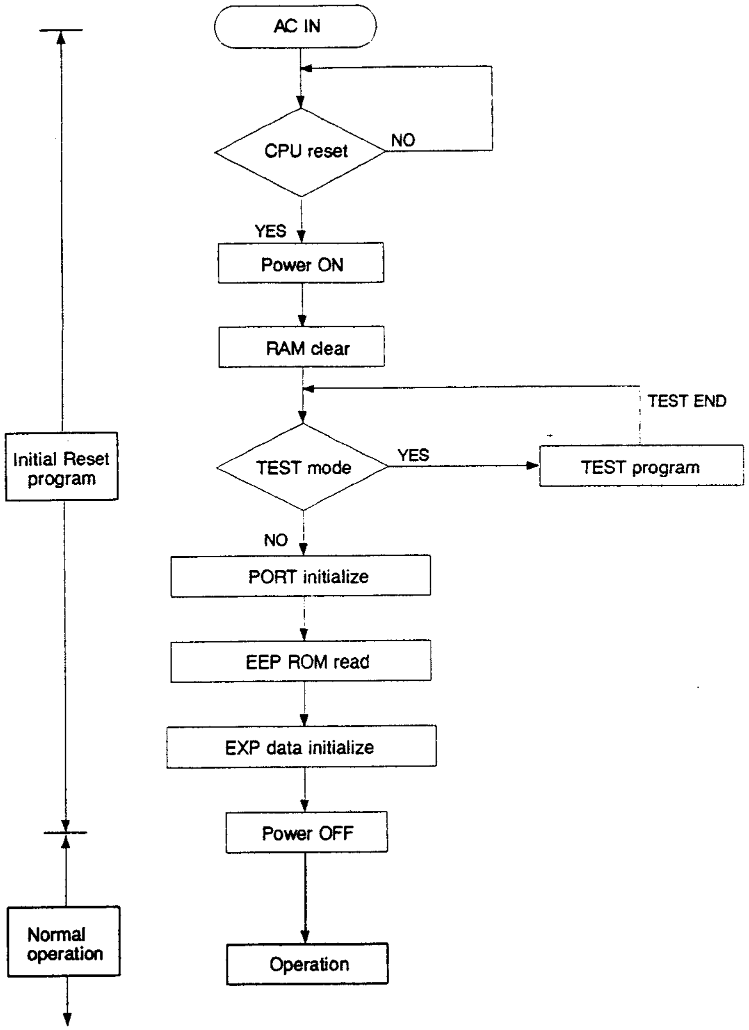
Fig. 2-4-18

2.5 Quick advice

1. Check of faulty mechacon CPU

The following flowchart shows the initial reset program executed by the CPU just after AC power is supplied.
If this program is not executed normally, the set may be completely inoperable or may malfunction. Some faults can be traced to the failure of this program to execute normally, but in general the reason for this is not the CPU but in the external components.

This is especially so in recent models such as this in which information from operation switches and sensors is transmitted to the CPU through an input expander IC. In the event of the fault, it will therefore be necessary to check the expander IC, EEP-ROM IC etc. in addition to the usual checks on Vcc, crystal etc.


AC IN
CPU reset
NO
YES
Power ON
RAM clear
TEST END
TEST mode
YES
TEST program
NO
PORT initialize
EEP ROM read
EXP data initialize
Power OFF
Operation
Initial Reset program
Normal operation

2.6 MAIN PARTS REPLACEMENT AND ADJUSTMENT

2.6.1 Stator assembly

1) Expand the hook in the direction indicated by the arrow and remove the Cleaner Assembly.
2) Take out 1 screw (D), then remove the Earth Plate.
3) Take out 2 screws (A).
4) Raise the Stator Assembly in the direction indicated by the arrow to remove it (also remove the Inertia Roller).
5) Remove the flat cable.
6) To install, first secure the flat cable, then insert 2 screws (A).
7) After installing, be sure to perform switching point adjustment.

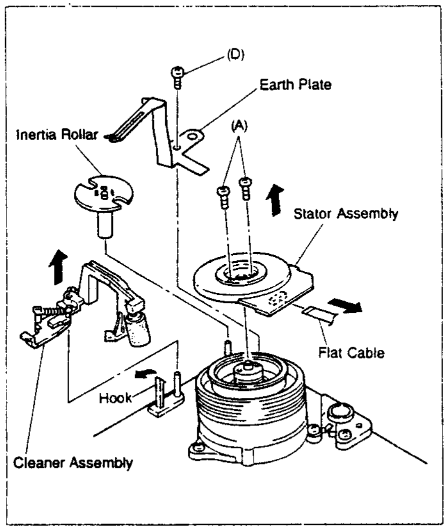

(D)
Earth Plate
Inertia Rollar
(A)
Stator Assembly
Flat Cable
Hook
Cleaner Assembly

Fig. 2-6-1 Stator assembly

2.6.2 Rotor assembly

1) Remove the Cleaner Assembly, Earth Plate and Stator Assembly.
2) Take out 2 screws (B) and remove the Rotor Assembly.

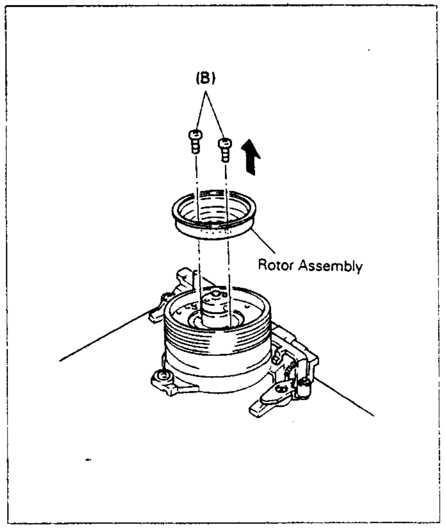

(B)
Rotor Assembly

Fig. 2-6-2 Rotor assembly-1

Note: *A normal picture will not be obtained unless the phase is properly aligned when installing the Rotor Assembly. Also note there are three types of Rotors.*

3) Align the Upper Drum and Rotor Assembly phase as indicated in Fig. 2-6-3.
4) Overlap holes (a) of the Upper Drum with holes (b) of the Rotor Assembly and secure with 2 screws (B) (see Fig. 2-6-2).

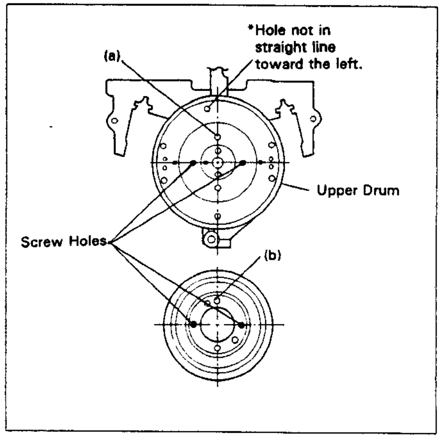

*Hole not in straight line toward the left.
(a)
Upper Drum
Screw Holes
(b)

Fig. 2-6-3 Rotor assembly-2

2.6.3 Drum sub assembly

1) Disengage the PRE/REC AMP board connector and flat cable.
2) Take out 3 screws (C) and remove the Drum Subassembly.

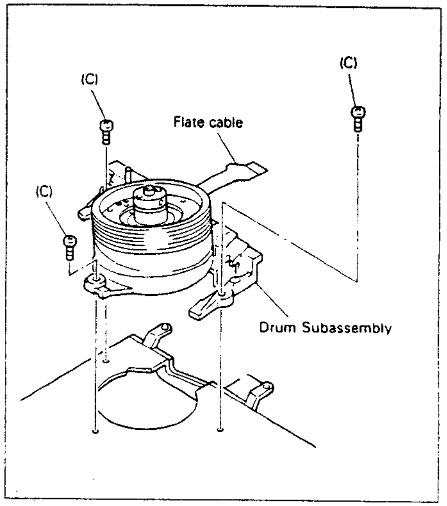

(C)
(C)
Flate cable
(C)
Drum Subassembly

Fig. 2-6-4 Drum sub assembly

2.6.4 Upper Drum assembly

1. Removal

1) Remove the Stator and Rotor Assemblies.
2) Use a 1.5 mm hexagonal wrench to loosen the Collar Assembly screw and remove the Collar Assembly.
3) Remove the Upper Drum Assembly and use tweezers to remove the Washer.

Note: ***If the Brush is replaced, do not apply the grease to the contacts.***

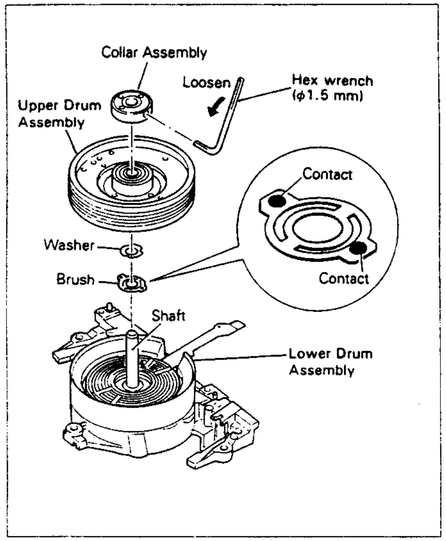

Collar Assembly
Loosen
Hex wrench (φ1.5 mm)
Upper Drum Assembly
Contact
Washer
Brush
Contact
Shaft
Lower Drum Assembly

Fig. 2-6-5 Upper drum assembly-1

2. Installation

1) Use an air brush to clean the Lower Drum Assembly and the coil section of the new Upper Drum Assembly.
2) Set a new Washer and Upper Drum Assembly on the Drum shaft (see Fig. 2-6-5).

Note: *Be sure to use the new Washer supplied with the replacement Upper Drum Assembly.*

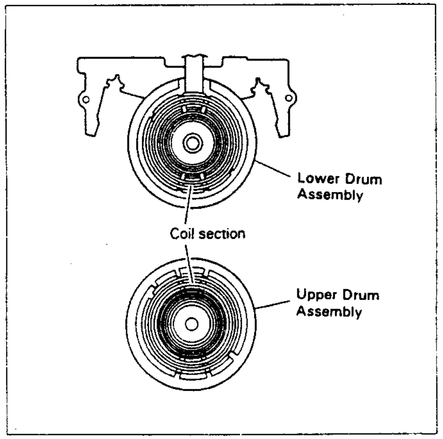

Lower Drum Assembly
Coil section
Upper Drum Assembly

Fig. 2-6-6 Upper drum assebly-2

3) Note the top and bottom of the Collar Assembly and determine the position as indicated in Fig. 2-6-7.

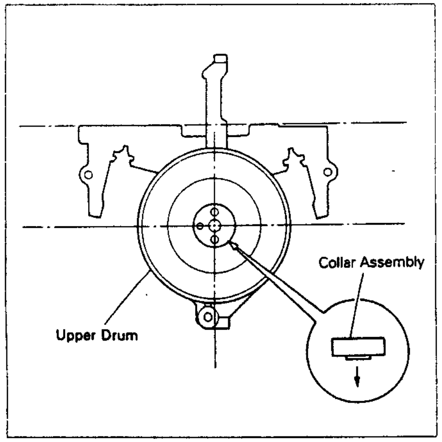

Collar Assembly
Upper Drum

Fig. 2-6-7 Collar assembly-1

4) While pressing the Collar Assembly evenly from above with the fingertips, secure the hexagonal screw.

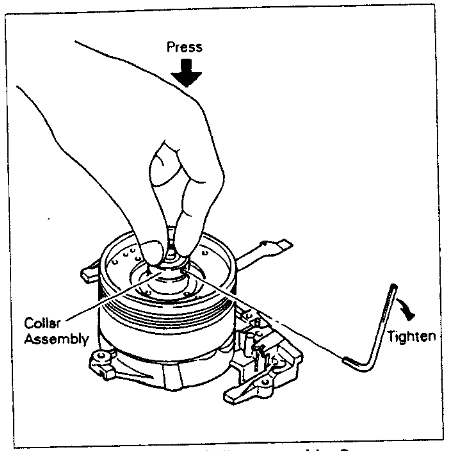

Press
Collar Assembly
Tighten

Fig. 2-6-8 Collar assembly-2

5) After installing, gently turn the Upper Drum by hand and confirm normal rotation.
6) Install the Rotor and Stator Assemblies.
7) Clean the Upper and Lower Drum Assemblies and perform the following adjustments;
   - ·Switching Point Adjustment
   - ·Interchangeability Adjustment (be sure to check LP mode)
   - ·Recording colour level Adjustment

2.6.5 A/C head

1. Removal

1) Take out 2 screws ① and remove the A/C head arm assembly.

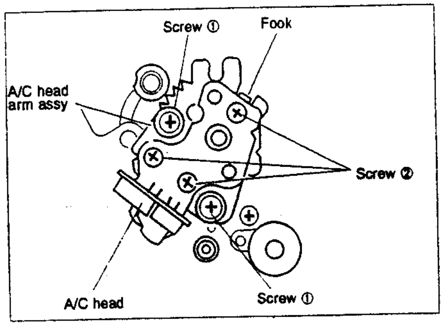

Screw ①
Fook
A/C head arm assy
Screw ②
A/C head
Screw ①

Fig. 2-6-9 A/C head replacement-1

2) When replacing the A/C head only, remove 3 screws ②, use care not to misplace the 3 springs.

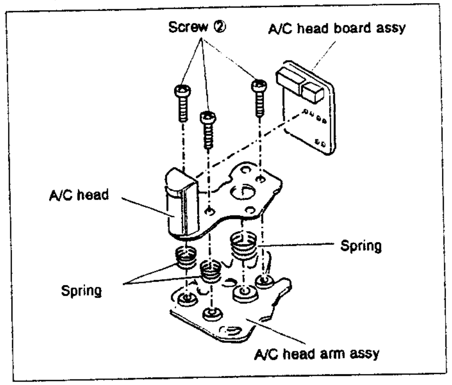

Screw ②
A/C head board assy
A/C head
Spring
Spring
A/C head arm assy

Fig. 2-6-10 A/C head replacement-2

2. Installation

1) Temporarily set the A/C head height as indicated in Fig. 2-6-11.

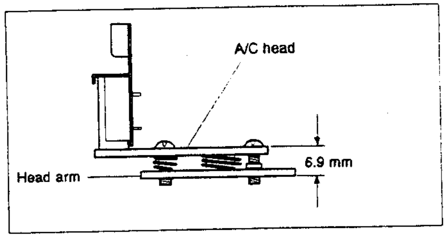

A/C head
6.9 mm
Head arm

Fig. 2-6-11 A/C head height

Notes:
- ·*It is very important to correctly adjust the control pulse and audio signal in addition to the mechanical tape path.*
- ·*Perform interchangeability adjustments after electrical adjustments.*

2.7 TAPE INTERCHANGEABILITY ADJUSTMENT

Note: *This adjustment is extremely important. However, it is normally not required during routine service. Perform only after replacing major components (A/C head, drum assembly, etc.).*

2.7.1 Tilt adjustment of A/C head

1) Use blank tape and set for playback.
2) Turn 1 screw ① clockwise to where the tape curls just slightly at the take-up guide pole bottom flange, as shown in Fig. 2-7-1.
3) Then slowly turn screw ① counter-clockwise to where the curling ceases.

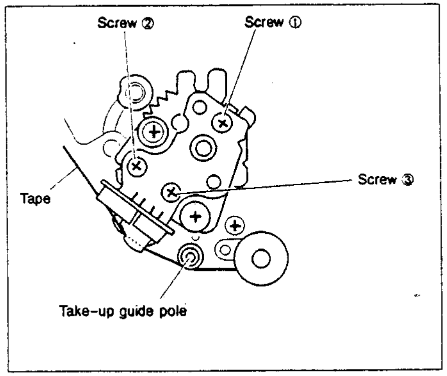


Fig. 2-7-1 A/C head tilt adjustment

2.7.2 Azimuth adjustment of A/C head

1) Connect the oscilloscope to the audio output jack on the rear of the deck.
2) Playback the stairstep portion (6 kHz, Mono) of the alignment tape.
3) Adjust 1 screw ② on the A/C head arm assembly in Fig. 2-7-1 so that the audio output is both maximum and with minimum fluctuation.

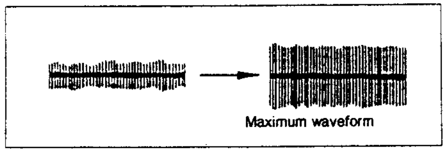


Fig. 2-7-2 A/C head azimuth adjustment

2.7.3 Height adjustment of A/C head

1) Playback the blank tape and observe the control head area.
2) Turn screws ①, ② and ③ by small and equal increments (about 45° at a time) to adjust the A/C head height so that equal amounts of head core can be seen, by both core area as shown in Fig. 2-7-3 (upper core of the audio erase head and bottom core of the control head).
3) Check the azimuth adjustment (2.7.2), if necessary adjust it.

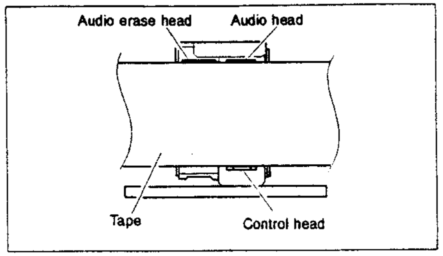


Fig. 2-7-3 A/C head height adjustment

2.7.4 Phase (X-value) adjustment of A/C head

1) Playback the stairstep portion of the alignment tape [MH-2].
2) Connect the oscilloscope to TP6 (PB FM) on the PRE/REC board. Use TP411 (DRUM FF) on the MAIN board as a trigger. Confirm that the FM waveform appears, as in Fig. 2-7-5.
3) Set the neutral manual tracking position, by simultaneously press of the (+) and (–) tracking buttons.
4) If adjustment is required, slightly loosen screws ④ and ⑤. Set A/C head positioning tool on the A/C head adjusting boss as shown in Fig. 2-7-4.
5) Turn the tool first to position the A/C head fully toward the capstan. Then gradually return it toward the drum and stop at the position of maximum FM waveform output level as shown in Fig. 2-7-5.
6) Tighten screw ⑤. Remove the tool and tighten screw ④.
7) Eject the tape and then re-insert alignment tape [MH-2L]. Playback the stairstep of the alignment tape. Set the neutral manual tracking position.
8) Confirm maximum playback FM waveform outut level as shown in Fig. 2-7-5.
9) If not maximum, slightly loosen the screws ④ and ⑤. Use the tool and adjust the head position for the nearest maximum point. Then tighten screws ④ and ⑤.

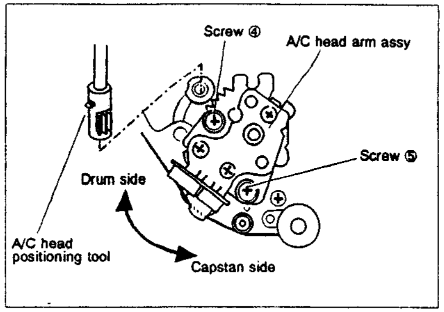


Fig. 2-7-4 A/C head phase adjustment-1

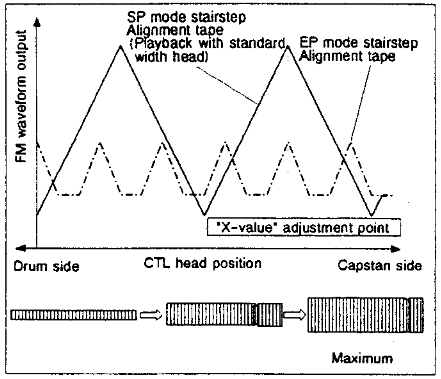


Fig. 2-7-5 A/C head phase adjustment-2

2.7.5 LP mode auto tracking

1) Playback the stairstep of the alignment tape [MH-2L].
2) Confirm that the A/V digital tracking LED stops flashing and remains on.
3) Press the "D" button of the preseting unit [PTU94008] to turn off the A/V digital tracking LED.
4) Press the "D" button again to change the mode to the LP interchangeability adjustment mode and confirm that the A/V digital tracking LED stops flashing and goes off.

Note: *When the MH-2L alignment tape is automatically ejected from the cassette housing, repeat the above adjustment (phase adjustment of A/C head, sec. 2.7.4).*

2.7.6 Tension pole position

1) Turn the eccentric adjust pin for the notch of the pin with the mark as shown in Fig. 2-7-6.
2) Set the cassette housing assembly. Use the back tension cassette gauge and set for the playback mode.
3) Confirm reading of 35 to 48 g·cm.

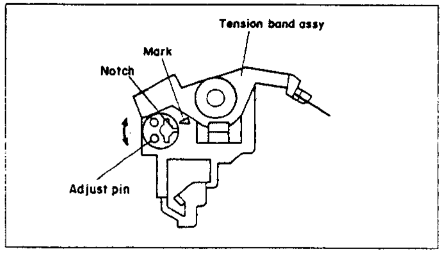


Fig. 2-7-6 Tension pole position

2.7.7 Clutch assembly adjustment

1) Remove cassette housing and set for playback mode (Refer to sec. 2.1.2).
2) Set torque gauge on the take-up reel disk. Gradually relax your grip on the gauge and read the needle indication at the point the gauge begins to rotate with the disk. Confirm indication of 60 to 100 g·cm.

2.7.8 SUP/TU pole base adjustment

This is the most important adjustment. If incorrect, proper tracking will not be obtained in recording and playback.
Other problems that may occur are noise in parts of the picture, poor colour reproduction and picture instability.

1) Playback the stairstep portion of the alignment tape [MH-2].
2) Connect the oscilloscope to TP6 (PB FM) on the PRE/REC board. Use TP411 (DRUM FF) on the MAIN board as a trigger. Confirm that the FM waveform appears, as in Fig. 2-5-9.
3) Operate the tracking adjustment (press the tracking buttons during playback) and set for maximum playback FM waveform.
4) If adjustment is required, first slightly loosen the set screw located at the bottom of the guide rollers. Using the guide roller adjustment tool, adjust the supply and take-up guide rollers (refer to Fig. 2-7-8) to obtain the correct waveform. Refer to Fig. 2-7-9.

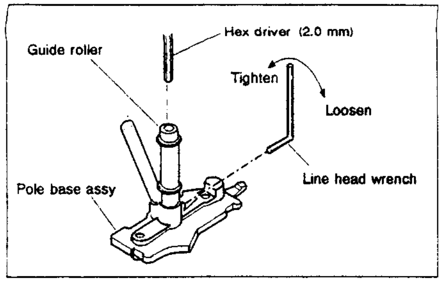

Hex driver (2.0 mm)
Guide roller
Tighten
Loosen
Pole base assy
Line head wrench

Fig. 2-7-8 SUP/TU pole base assembly

5) By pushing the tracking buttons several times, vary the FM waveform output from maximum to minimum (and vice versa) gradually, and confirm that the variation proceeds in a flat shape, as in Fig. 2-7-10.
6) If the FM waveform varies and is not mostly flat, tweak the height of guide roller (s) until the waveform is as flat as possible.
7) Eject a tape and then playback tape again, since the height of guide rollers may move during adjustment. Confirm, when pushing the tracking (+) and (-) buttons, FM waveform variation is always flat.

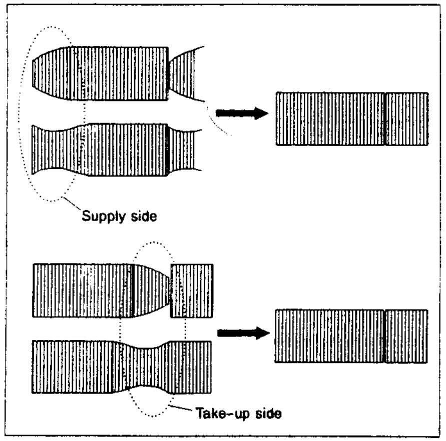

Supply side
Take-up side

Fig. 2-7-9 FM waveform -1

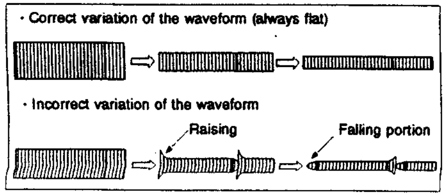

· Correct variation of the waveform (always flat)
· Incorrect variation of the waveform
Raising
Falling portion

Fig. 2-7-10 FM waveform -2

2.7.9 Tape transport system confirmation

1) Use a 140-minute or more long tape and check at the tape beginning and ending portion according to the following steps.
2) Confirm absence of curling, wrinkling, slippage, etc at the (a), (b), (c) and (d) portions, as shown in Fig. 2-7-11.
3) If curling or winkling are observed during the above checks, perform the steps 2.7.1 to 2.7.8.

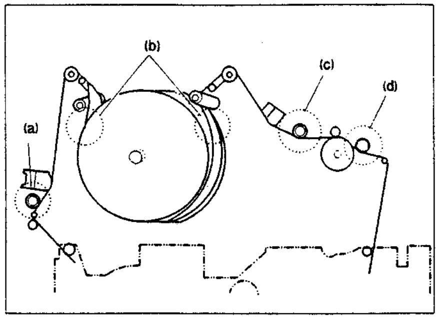


Fig. 2-7-11 Tape transport system

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 DECK SECTION ADJUSTMENT

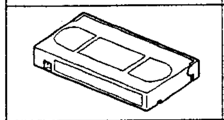
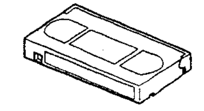
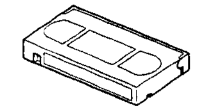
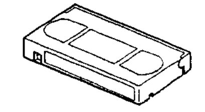
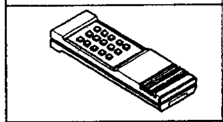
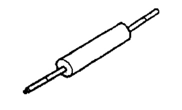
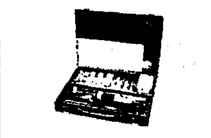
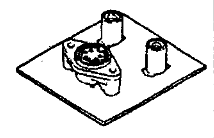
3.1.1 PRECAUTION

Electrical adjustments are required after replacing circuit components and certain mechanical parts.
It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipments is available.

1. Required test equipment

1. Colour television or monitor
2. Osciloscope: wide-band, dual-trace, triggered delayed sweep
3. Frequency counter
4. Audio oscillator
5. AC millivoltmeter
6. Digital voltmeter
7. Signal generator: RF/IF sweep/marker
8. Signal generator: PAL colour bar
9. Recording tape

2. Required adjustment tools

Alignment tape (SP) MH-2	Alignment tape (LP) MH-2L
	
Alignment tape (S-VHS) MH-2H	Alignment tape (FM AUDIO) MH-F2
	
Presetting unit PTU94008	Adjustment driver YTU93004-2
	
※SMC replacement tools YTU94038C	RCA-S Adapter PTU93001A
	

※**Note:** *It is convenient for replacing chip parts.*

Table 3-1-1 Required adjustment tools

3. Colour bar signal, colour bar pattern and video sweep signal

- SECAM colour bar signal waveform

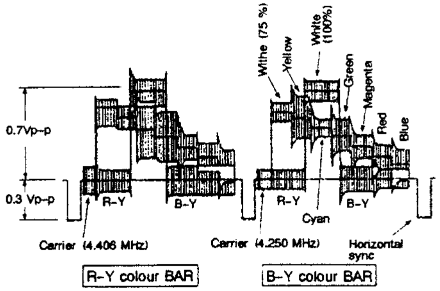

0.7Vp-p
0.3 Vp-p
R-Y
B-Y
R-Y
B-Y
Withe (75 %)
Yellow
White (100%)
Green
Magenta
Red
Blue
Cyan
Carrier (4.406 MHz)
Carrier (4.250 MHz)
Horizontal sync
R-Y colour BAR
B-Y colour BAR

Fig. 3-1-1 SECAM colour bar signal waveform

- PAL colour bar signal waveform

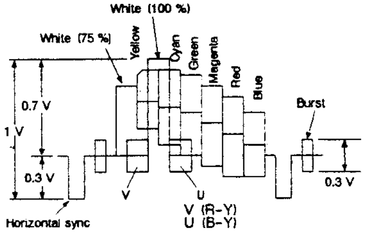

White (100 %)
White (75 %)
Yellow
Cyan
Green
Magenta
Red
Blue
Burst
0.7 V
1 V
0.3 V
0.3 V
V
U
V (R-Y)
U (B-Y)
Horizontal sync

Fig. 3-1-2 PAL Colour bar signal waveform

- PAL colour bar pattern

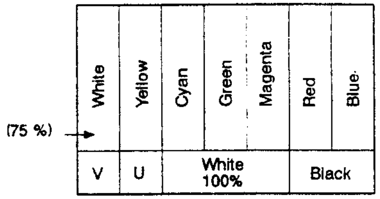

White
Yellow
Cyan
Green
Magenta
Red
Blue
(75 %)
V
U
White 100%
Black

Fig. 3-1-3 PAL colour bar pattern

- Video sweep signal

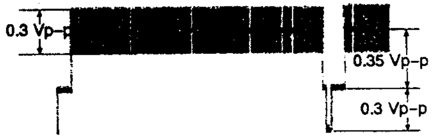

0.3 Vp-p
0.35 Vp-p
0.3 Vp-p

Fig. 3-1-4 Video sweep signal

3.1.2 SWITCHING REGULATOR CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the SWITCHING REGULATOR BOARD.*

1. 5V DC output voltage

Signal	•AUX •TUNER
Mode	•REC : SP
Equipment	•Digital voltmeter
Measurement point	•CN3 pin 6 (SWD 5 V) •CN3 pin 5 (GND)
Adjustment part	•R34 (SWD 5 V)
Specification	•5.30 ± 0.05 V DC

1) Connect a digital voltmeter to pin 6 of CN3 (SWD 5V) and pin 5 of CN3 (GND).
2) Adjust R34 for 5.30 ± 0.05 V DC.

3.1.3 SERVO CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.*

1. PB switching point

Signal	•Alignment tape (MH-2) •Stairstep
Mode	•PB •Auto tracking : OFF
Equipment	•Oscilloscope
Measurement point	•TP10 (VIDEO OUT) [TERMINAL board]
Trigger slope (-)	•TP411 (DRUM FF)
Adjustment tool	•Presetting unit [PTU94008]
Specification	•6.5 ± 0.5 H

Note: *Set VCR to the mode A by remote controller.*

1) Connect an oscilloscope to TP10 and TP411.
2) Playback the stairstep signal of the alignment tape.
3) Set the tracking control to the centre position by simultaneously pressing the (+) and (-) buttons.
4) Adjust by pressing "E" (+) or "F" (-) buttons of the presetting unit for position the trigger point 6.5 ± 0.5 H from V.sync.

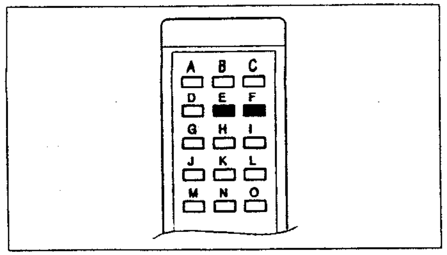


Fig. 3-1-5 Presetting unit

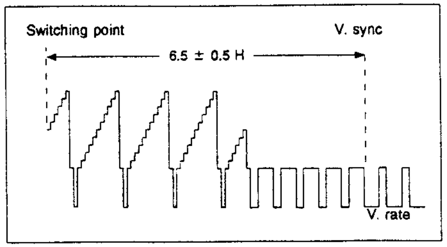


Fig. 3-1-6 PB switching point

2. Slow tracking preset

Signal	•AUX •Colour bar
Mode	•REC → PB (SLOW) •SP/LP •Auto tracking : OFF
Equipment	•TV-Monitor
Adjustment tool	•Presetting unit [PTU94008]
Specification	•Mimimum noise

Note: *Set VCR to the mode A by remote controller.*

1) Record a colour bar signal in the SP mode.
2) Playback recorded signal on the FWD slow mode.
3) Set the tracking control to the centre position by simultaneously pressing the (+) and (-) buttons.
4) Observe the display on a TV monitor and adjust for optimum noise condition (best tracking) by depressing "C" (+) or "B" (-) buttons of the presetting unit as required.
5) Depress the STOP button.
6) Confirm that the bar noise is not visible on the monitor in the slow mode.
7) Repeat steps 2) to 6) in REV slow mode.
8) Repeat steps 1) to 7) in LP mode.

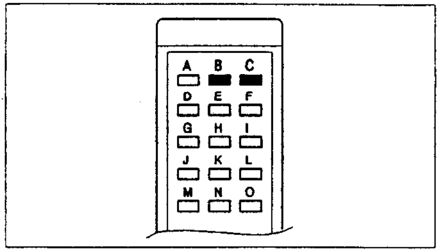


Fig. 3-1-7 Presetting unit

3.1.4 VIDEO CIRCUIT

Notes:
- *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD, and S-VHS mode.*
- *Set VCR to the mode A by remote controller.*

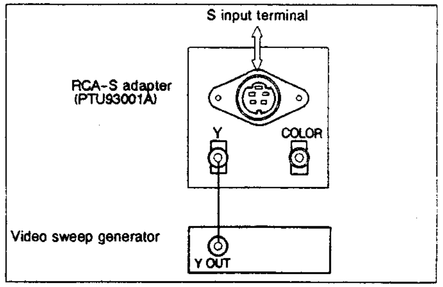


Fig. 3-1-8 S input connection

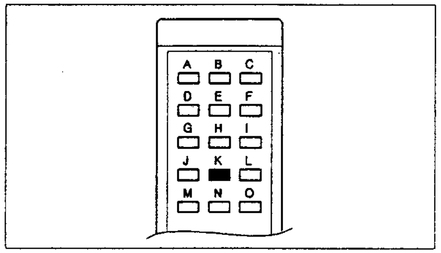


Fig. 3-1-9 Presetting unit

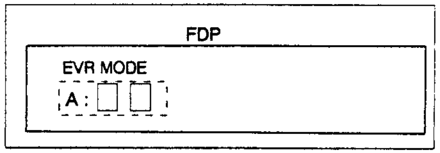


Fig. 3-1-10 EVR mode (FDP)

1. EE Y level

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) [TERMINAL BOARD]
Adjustment tool	•Presetting unit [PTU94008] •Remoto controller
EVR mode	•A : 11
Specification	•2.00 ± 0.06 Vp-p (Unterminate)

1) Connect an oscilloscope to TP20 of the TERMINAL board.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 11" by pressing ① numeric key twice of the remote controller.
4) Adjust TV PROG "+" "-" button of the remote controller for 2.00 ± 0.06 Vp-p as shown in Fig. 3-1-11.
5) Set normal VCR mode by pressing "K" button more than 5 seconds again.

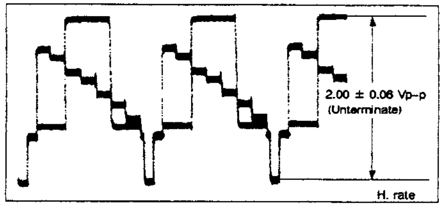


Fig. 3-1-11 EE Y level

2. Digital I/O level

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP251 (Y/V) •TP223 (SEP Y)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 6
Specification	•Equal levels

1) Connect one channel (CH-1) of a dual trace oscilloscope to TP251 and the other channel (CH-2) to TP223.
2) Set the oscilloscope for ALT mode, and overlap the waveform.
3) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
4) Set "A : 6" by pressing ⑥ numeric key of the remote controller.
5) Adjust TV PROG "+""-" button of the remote controller for equal Y levels.

3. S-VHS PB Y level

Signal	•Colour bar
Mode	•REC → PB : SP •S-VHS •Auto tracking : OFF
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) (TERMINAL board)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 11
Specification	•2.00 ± 0.06 Vp-p (Unterminate)

1) Connect an oscilloscope to TP20 of the TERMINAL board.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 11" by pressing ① numeric key twice of the remote controller.
4) Record a colour bar signal then play it back.
5) Adjust TV PROG "+" "-" button of the remote controller for 2.00 ± 0.06 Vp-p as shown in Fig. 3-1-12.
6) Set normal VCR mode by pressing "K" button more than 5 seconds again.

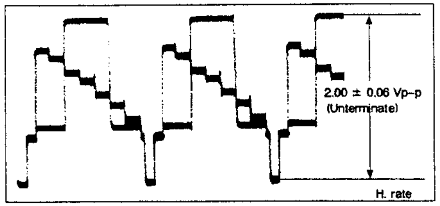


Fig. 3-1-12 S-VHS PB Y level

4. VHS PB Y level

Signal	•Colour bar
Mode	•REC → PB : SP •VHS •Auto tracking : OFF
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) (TERMINAL board)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	A : 11
Specification	•2.00 ± 0.06 Vp-p (Unterminate)

1) Connect an oscilloscope to TP20 of the TERMINAL board.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 11" by pressing ① numeric key twice of the remote controller.
4) Record a colour bar signal then play it back.
5) Adjust TV PROG "+" "-" button of the remote controller for 2.00 ± 0.06 Vp-p as shown in Fig. 3-1-13.
6) Set normal VCR mode by pressing "K" button more than 5 seconds again.

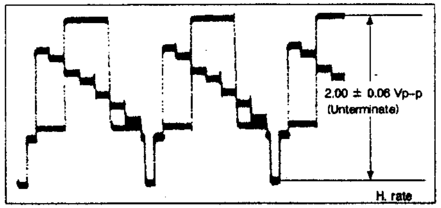


Fig. 3-1-13 VHS PB Y level

5. S-VHS VIDEO EQ

Signal	•S input •Video sweep
Mode	•REC → PB : SP/LP •S-VHS •Auto tracking : OFF •EDIT SW : ON (PB)
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) (TERMINAL board)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 3
Specification	•3.6 ± 0.2 scale (SP) •2.8 ± 0.2 scale (LP)

1) Connect an oscilloscope to TP20 of the TERMINAL board.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 3" by pressing ③ numeric key of the remote controller.
4) Record a video sweep signal in S-VHS SP mode, then play it back.
5) If the sweeper's 100 kHz marker frequency is for 4 scale divisions on the oscilloscope screen, adjust TV PROG "+" "-" button of the remote controller so that 3 MHz marker level becomes 3.6 ± 0.2 scale divisions.
6) Record a video sweep signal in S-VHS LP mode, then play it back.
7) If the sweeper's 100 kHz marker frequency is for 4 scale divisions on the oscilloscope screen, adjust TV PROG "+" "-" button of the remote controller so that 3 MHz marker level becomes 2.8 ± 0.2 scale divisions.

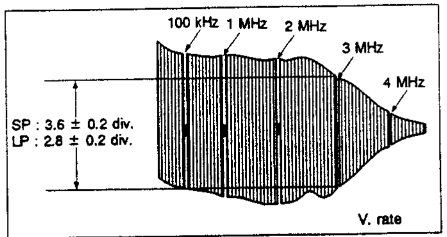


Fig. 3-1-14 S-VHS VIDEO EQ

《Alternate method》

1) Record a colour bar signal in S-VHS SP mode.
2) Play it back to observe the picture and adjust TV PROG "+" "-" button for best resolution, without impaired S/N.
3) So after adjustment, confirm black or white spot.
4) Record a colour bar signal in S-VHS LP mode.
5) Play it back to observe the picture and adjust TV PROG "+" "-" button for best resolution, without impaired S/N.
6) So after adjustment, confirm black or white spot.

6. SECAM detect

Signal	•SECAM colour bar
Mode	•EE
Equipment	•Oscilloscope
Measurement point	•TP244 (SECAM DETECT)
Adjustment part	•LC201 (SECAM DETECT)
Specification	•a:b = 1:1

1) Connect an oscilloscope to TP244.
2) Adjust LC201 so that A and B are related as follows: a:b = 1:1.

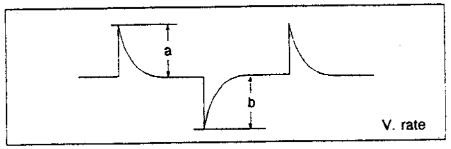


Fig. 3-1-15 SECAM detect

7. REC colour level

Signal	•Colour bar
Mode	•PB (MH-2H) •Colour bar •REC → PB : SP / LP •S-VHS
Equipment	•Oscilloscope
Measurement point	•PB colour out
Trigger slope (-)	•TP411 (DRUM FF)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 2
Specification	•130 ± 5 % : SP •120 ± 5 % : LP

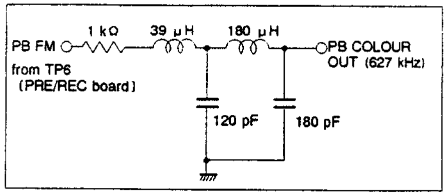


Fig. 3-1-16 LPF

1) Use a LPF as shown in Fig. 3-1-16.
2) Playback the SP (LP) colour bar signal of MH-2H alignment tape.
3) Set the tracking of the Front panel to the Auto tracking off position by simultaneously pressing the "∨" "∧" TV PROG buttons.
4) Adjust by pressing the "∨" "∧" TV PROG buttons of the Front panel for maximum level of the colour waveform and make a note of the higher colour level "B".
5) Press the STOP/EJECT button and eject the MH-2H alignment tape.
6) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
7) Set "A : 2" by pressing ② numeric key of the remote controller.
8) Record a colour bar signal in SP (LP) mode, and playback recorded colour bar signal.
9) Before recording, adjust TV PROG "∨" "∧" button of the remote controller so that the higher level channel becomes 130 ± 5 % : SP (120 ± 5 % : LP) of the note "B" level during playback as shown in Fig. 3-1-17.

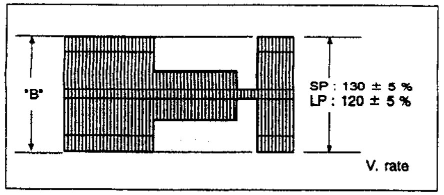


Fig. 3-1-17 REC colour level

8. Sub emphasis input level

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP226 (SUB EMPHASIS)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 15
Specification	•400 ± 20 mVp-p

1) Connect an oscilloscope to TP226.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 15" by pressing ① and ⑤ numeric key of the remote controller.
4) Adjust TV PROG "+" "-" button of the remote controller for 400 ± 20 mVp-p.

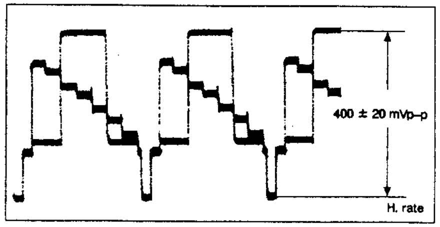


Fig. 3-1-18 Sub emphasis input level

9. S-VHS / VHS white clip

Signal	•Colour bar
Mode	•EE •S-VHS / VHS
Equipment	•Oscilloscope
Measurement point	•TP252 (W/D CLIP)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 14
Specification	•White clip : 210 ± 4 % (S-VHS) •White clip : 190 ± 4 % (VHS)

1) Connect an oscilloscope to TP252.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 14" by pressing ① and ④ numeric key of the remote controller.
4) Adjust TV PROG "+" "-" button of the remote controller for 210 ± 4 % (190 ± 4 %) white clip as shown in Fig. 3-1-19.

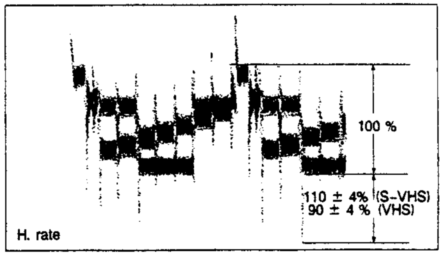


Fig. 3-1-19 S-VHS / VHS white clip

10. S-VHS / VHS carrier & deviation

· Carrier

Signal	•No signal - VIDEO INPUT
Mode	•EE •S-VHS / VHS
Equipment	•Frequency counter
Measurement point	•TP204 (CARR / DEV)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 12
Specification	•5.40 ± 0.03 MHz (S-VHS) •3.80 ± 0.03 MHz (VHS)

1) Connect an oscilloscope to TP204.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 12" by pressing ① and ② numeric key of the remote controller.
4) Adjust TV PROG "+" "-" button of the remote controller for 5.40 ± 0.03 MHz (3.80 ± 0.03 MHz).

· Deviation

Signal	•Colour bar
Mode	•REC → PB •S-VHS / VHS
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) (TERMINAL board)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 13
Specification	•2.00 ± 0.06 Vp-p (Unterminate)

1) Connect an oscilloscope to TP20 of the TERMINAL board.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 13" by pressing ① and ③ numeric key of the remote controller.
4) Record and playback a colour bar signal.
5) Before recording, adjust TV PROG "+" "-" button of the remote controller so that Y level becomes 2.00 ± 0.06 Vp-p during playback as shown in Fig. 3-1-20.

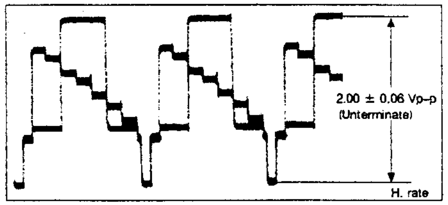


Fig. 3-1-20 Carrier & deviation

11. Pilot burst level

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•CN203 pin 4
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 16
Specification	•Equal level

1) Connect an oscilloscope to pin 4 of CN203.
2) Set EVR mode by pressing "K" button of the presetting unit more than 5 seconds.
3) Set "A : 16" by pressing ① and ⑥ numeric key of the remote controller.
4) Adjust TV PROG "+" "-" button of the remote controller for equal pilot burst level.

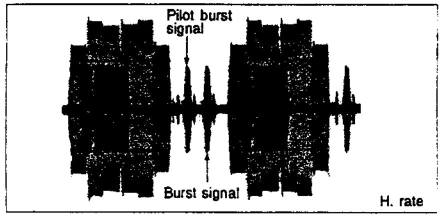


Fig. 3-1-21 Pilot burst level

3.1.5 AUDIO CIRCUIT

Note: *Unless otherwise specified, all measurement point and adjustment parts are located on the AUDIO UNIT BOARD.*

Important:

Item 2. and 3. .

1) Ordinarily performing these adjustments is not required. Adjustments should be performed only if IC1 on the AUDIO UNIT BOARD has been replaced.
2) To adjust, replace fixed resistor with variable chip resistor, then adjust as required.

1. Audio REC FM level

Signal	•AUX •VIDEO: Colour bar •AUDIO: No signal
Mode	•REC → PB : LP •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP253 (AUDIO PB FM) [PRE/REC board]
Trriger slope (-)	•TP411 (DRUM FF) [MAIN board]
Adjustment part	•R216 (A. REC FM) [PRE/REC board]
Specification	•60 ± 10 mVp-p.

1) Connect an oscilloscope to TP253.
2) Record a colour bar signal without an audio signal in S-VHS LP mode then playback.
3) Adjust R216 for 60 mVp-p playback level of higher channel level before recording.
4) Confirm that the lower channel level is more than 40 mVp-p.

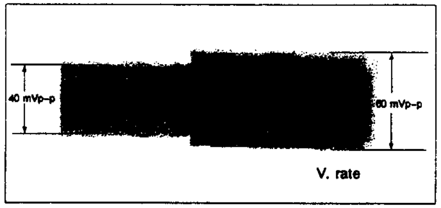


Fig. 3-1-22 Audio REC FM level

2. Carrier frequency adjustment

Signal	•No signal
Mode	•EE
Equipment	•Frequency counter
Measurement point	•IC1 pin 21 (L ch) •IC1 pin 43 (R ch)
Adjustment part	•R11 (L CARRIER) •R25 (R CARRIER)
Specification	•1.400 ± 0.005 MHz: R11 •1.800 ± 0.005 MHz: R25

1) Connect the frequency counter to IC1 pin 21.
2) Confirm that the frequency is 1.400 ± 0.005 MHz.
3) If necessary, replace R11 with the variable chip resistor NVP1301-153NZ and adjust it for 1.400 ± 0.005 MHz.
4) Connect the frequency counter to IC1 pin 43.
5) Confirm that the frequency is 1.800 ± 0.005 MHz.
6) If necessary, replace R25 with the variable chip resistor NVP1301-153NZ and adjust it for 1.800 ± 0.005 MHz.

3. Hi-Fi playback audio level

Signal	•Audio 1 kHz (-8 dBs)
Mode	•REC → PB
Equipment	•Audio oscillator •AC millivoltmeter
Measurement point	•Audio out (L ch) •Audio out (R ch)
Adjustment part	•R5 (L DEVIATION) •R30 (R DEVIATION)
Specification	•-8 dBs ± 1 dBs (0.9 Vp-p, 0.32 Vrms)

1) Connect an audio oscillator to audio input (left channel).
2) Record an audio 1 kHz signal and play it back.
3) Confirm that output level is -8 dBs (0.9 Vp-p, 0.32 Vrms).
4) If necessary, replace R5 with the variable chip resistor NVP1301-333NU and adjust it for -8 dBs (0.9 Vp-p, 0.32 Vrms).
5) Connect an audio oscillator to audio input (right channel).
6) Record an audio 1 kHz and play it back.
7) Confirm that output level is -8 dBs (0.9 Vp-p, 0.32 Vrms).
8) If necessary, replace R30 with the variable chip resistor NVP1301-333NU and adjust it for -8 dBs (0.9 Vp-p, 0.32 Vrms).

3.1.6 TIMER CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.*

1. Timer clock

Signal	•AUX •No signal
Mode	•EE
Equipment	•Frequency counter
Measurement point	•IC601 pin 64
Adjustment part	•C624 (TIMER CLOCK)
Specification	•1024.005 ± 0.001 Hz (976.5577 ± 0.0010 µsec)

1) Connect the frequency counter to IC601 pin 64 and GND.
2) Short IC601 pin 34 to IC601 pin 63.
3) Short the leads of capacitor C605 once in order to reset IC601.
4) Adjust C624 for 1024.005 ± 0.001 Hz (976.5577 ± 0.0010 µsec).
5) Disconnect a short wire.

3.1.7 DEMODULATOR CIRCUIT

Note: ***Unless otherwise specified, all measurement points and adjustment parts are located on the TUNER/DEMOD BOARD.***

1. Stereo separation adjustment

Signal	•Sweep generator output (96 dBμ, 1 kHz)
Mode	•EE
Equipment	•Oscilloscope
Measurement point	•CN4 pin 1
Adjustment part	•R264 (SEPARATION)
Specification	•Minimize

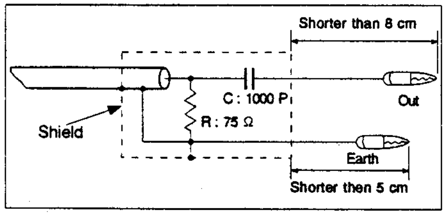

Shorter than 8 cm
C : 1000 P
R : 75 Ω
Out
Shield
Earth
Shorter then 5 cm

Fig. 3-1-23 Sweeper probe

1) Use a sweeper probe as shown in Fig. 3-1-23.
2) Supply 300 Hz L-only modulated IF signal to IF terminal of U/V tuner (front end).
3) Connect an oscilloscope to pin 1 of CN4.
4) Adjust R264 for minimum output level.

SECTION 4
CHARTS AND DIAGRAMS

SCHEMATIC DIAGRAM NOTES

Safety precautions

The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufactures recommended parts.

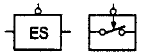
1. Schematic diagram values

Unless otherwise specified.

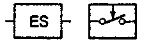
1) All resistance values are in ohms. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values in μH, (m: mH).
4) All diodes are 1SS133 or MA165, (refer to parts list).

2. Indications

AUX : Active only at high.
$\overline{\text{AUX}}$: Active only at low.



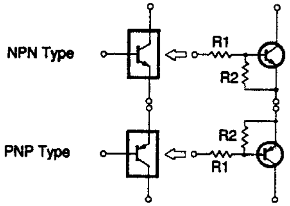
Active only at low for electronic switch.



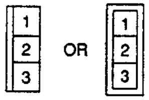
Active only at high for electronic switch.

Digital transistor :

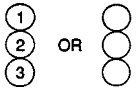
The digital transistor includes built in resistors.
It features small size and high reliability.


NPN Type
R1
R2
PNP Type
R2
R1

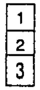
3. Interpreting Connector indications



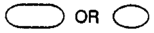
Removable connector



Direct connection on board



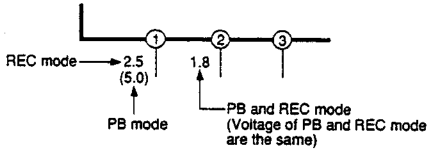
Non-removable Board connector



Connected pattern on board

4. Voltage measurement

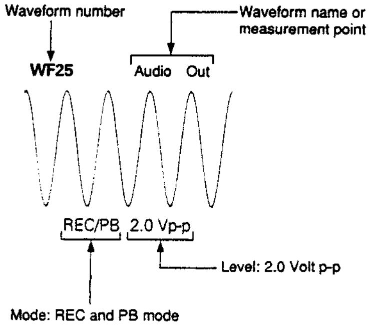
1) Voltage chart
   REC : Color bar signal in SP mode, normal VHS mode.
   PB : Alignment tape, color bar SP mode, normal VHS mode.
   — : Unmeasurable or unnecessary to measure.
2) Audio section
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode.
   PB : REC then playback it.
3) Movie Camera Section
   Measured as the grey scale pattern and color bar pattern which lighted up brightly is shot in the E-E mode.
4) Schematic diagram
   Voltage Indications for REC and PB mode on Schematic are as shown below.


1
2
3
REC mode
2.5
(5.0)
1.8
PB mode
PB and REC mode
(Voltage of PB and REC mode are the same)

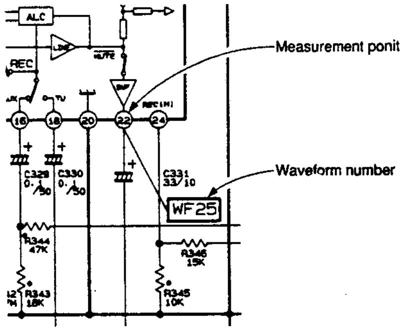
5. Waveform measurement

1) Waveform chart
   REC : Color bar signal in SP mode, normal VHS mode.
   PB : Alignment tape, color bar SP mode, normal VHS mode.
2) Audio Section
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode.
   PB : REC then playback it.
3) Movie Camera Section
   Measured as the grey scale or color bar pattern which lighted up brightly is shot in the E-E mode.

Example:


Waveform number
Waveform name or measurement point
WF25
Audio Out
REC/PB
2.0 Vp-p
Level: 2.0 Volt p-p
Mode: REC and PB mode

4) Schematic diagram
Waveform indications on schematic are as shown below.


ALC
REC
16
18
20
22
24
C329 0.1/50
C330 0.1/50
C331 33/10
WF25
R344 47K
R343 18K
R346 15K
R345 10K
Measurement ponit
Waveform number

6. Signal path Symbols

The arrows indicate the signal path as follows.

⇨	Playback signal path
▭▶	Playback and recording signal path
➡	Recording signal path (including E-E signal path)
▬▷	Y signal path
⇨▷	Color (Chroma) signal path
▭▶▷	R or R-Y signal path
➡▷	B or B-Y signal path
⇨▶	Capstan servo path
▭▶▶	Drum servo path
➡▶	Reel servo path

CIRCUIT BOARD NOTES

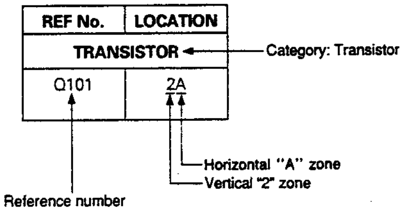
1. Color indications

1) Foil side :
Foil side patterns are indicated at gray shading.
2) Component side :
Component side patterns are indicated at RED shading.

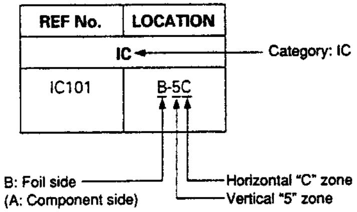
Notes:
Foil side (B side) ;
Parts on the foil side seen from foil face (pattern face) are indicated.
Component side (A side) ;
Parts on the component side seen from component face (parts face) are indicated.

2. Location of SMC indications

1) Single pattern :

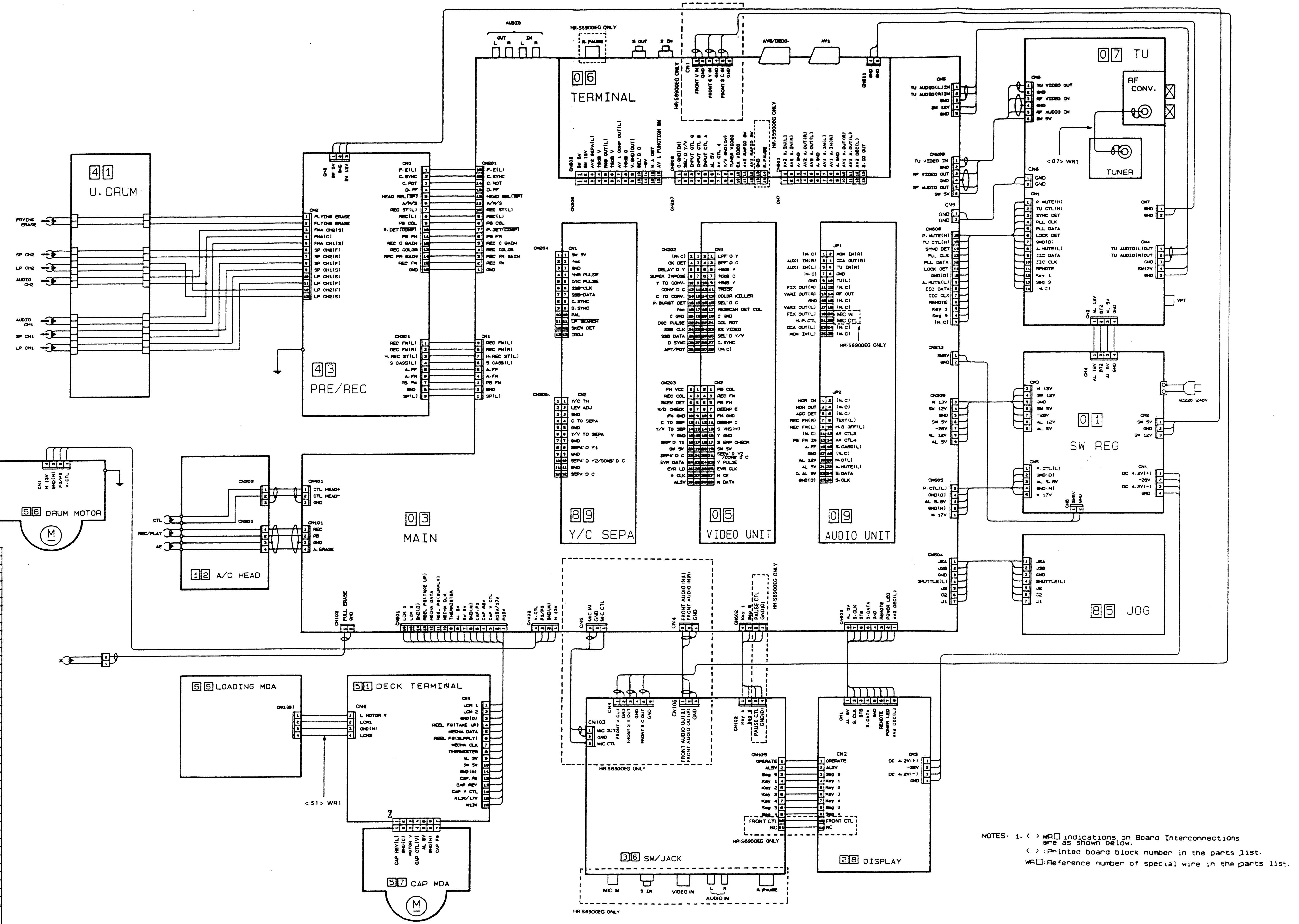

REF No.
LOCATION
TRANSISTOR
Category: Transistor
Q101
2A
Horizontal "A" zone
Vertical "2" zone
Reference number

2) Double pattern :


REF No.
LOCATION
IC
Category: IC
IC101
B-5C
B: Foil side
(A: Component side)
Horizontal "C" zone
Vertical "5" zone

Notes:
1) **For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION No. 82054D (January 1994).**
2) **For repairing SMC (Surface Mounted Components), please refer to the VIDEO SERVICE GUIDE No. VTS81001.**

.1 BOARD INTERCONNECTIONS

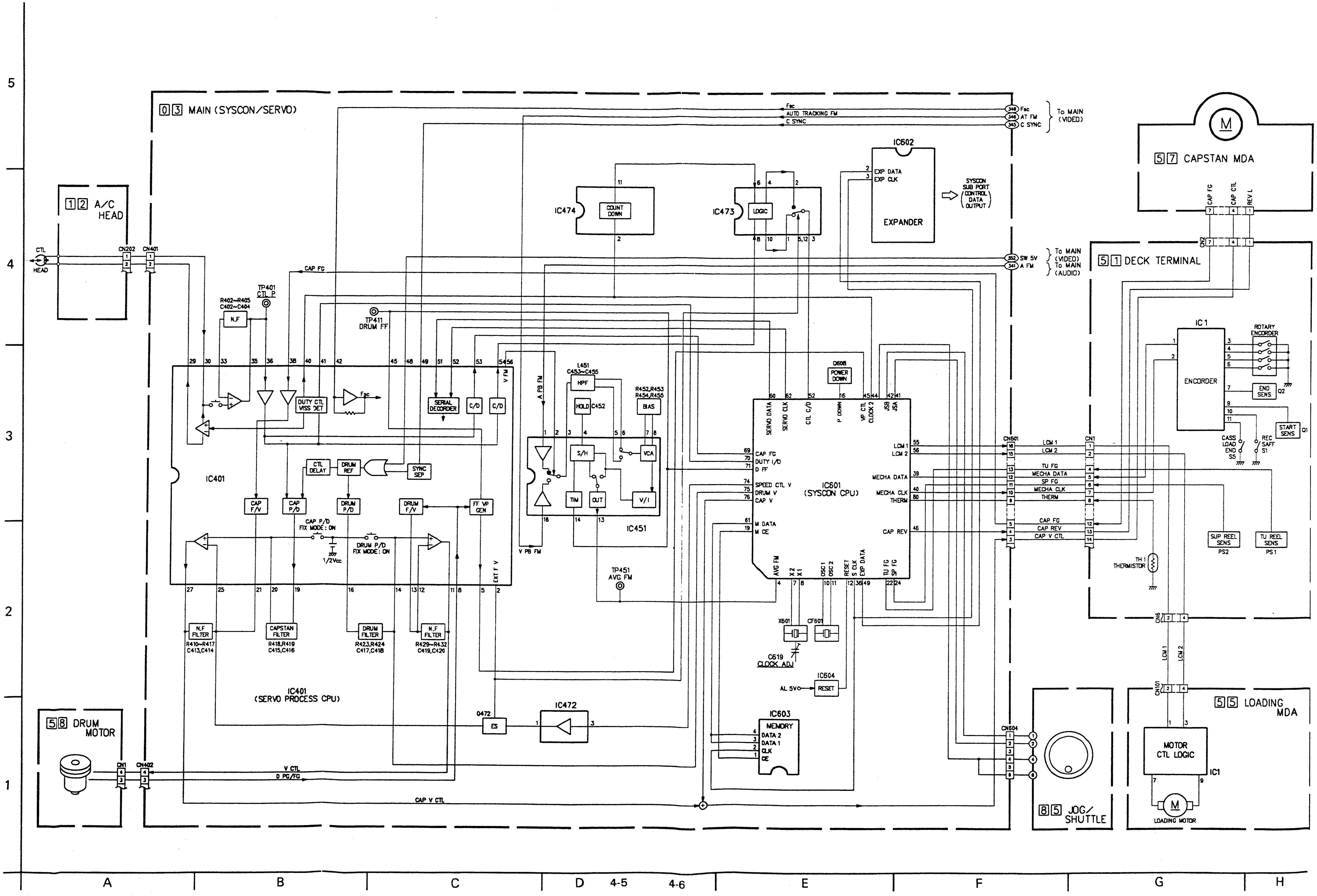


41 U. DRUM
43 PRE/REC
03 MAIN
06 TERMINAL
89 Y/C SEPA
05 VIDEO UNIT
09 AUDIO UNIT
07 TU
RF CONV.
TUNER
<07> WR1
01 SW REG
85 JOG
58 DRUM MOTOR
12 A/C HEAD
55 LOADING MDA
51 DECK TERMINAL
<51> WR1
57 CAP MDA
36 SW/JACK
28 DISPLAY
HR-S6900EG ONLY
AUDIO
OUT
IN
S OUT
S IN
AV2/DECO.
AV1
AC220-240V
MIC IN
S IN
VIDEO IN
AUDIO IN
R. PAUSE
5
4
3
2
1

NO	NAME
9 1	
9 0	
8 9	Y/C SEPA
8 8	
8 7	
8 6	
8 5	JOG
8 4	
5 8	DRUM MOTOR
5 7	CAP MDA
5 6	
5 5	LOADING MDA
5 1	DECK TERMINAL
4 3	PRE/REC
4 2	
4 1	U. DRUM
3 7	
3 6	SW/JACK
2 8	DISPLAY
1 4	
1 3	
1 2	A/C HEAD
1 1	
1 0	
0 9	AUDIO UNIT
0 8	
0 7	TU
0 6	TERMINAL
0 5	VIDEO UNIT
0 4	
0 3	MAIN
0 2	
0 1	SW REG

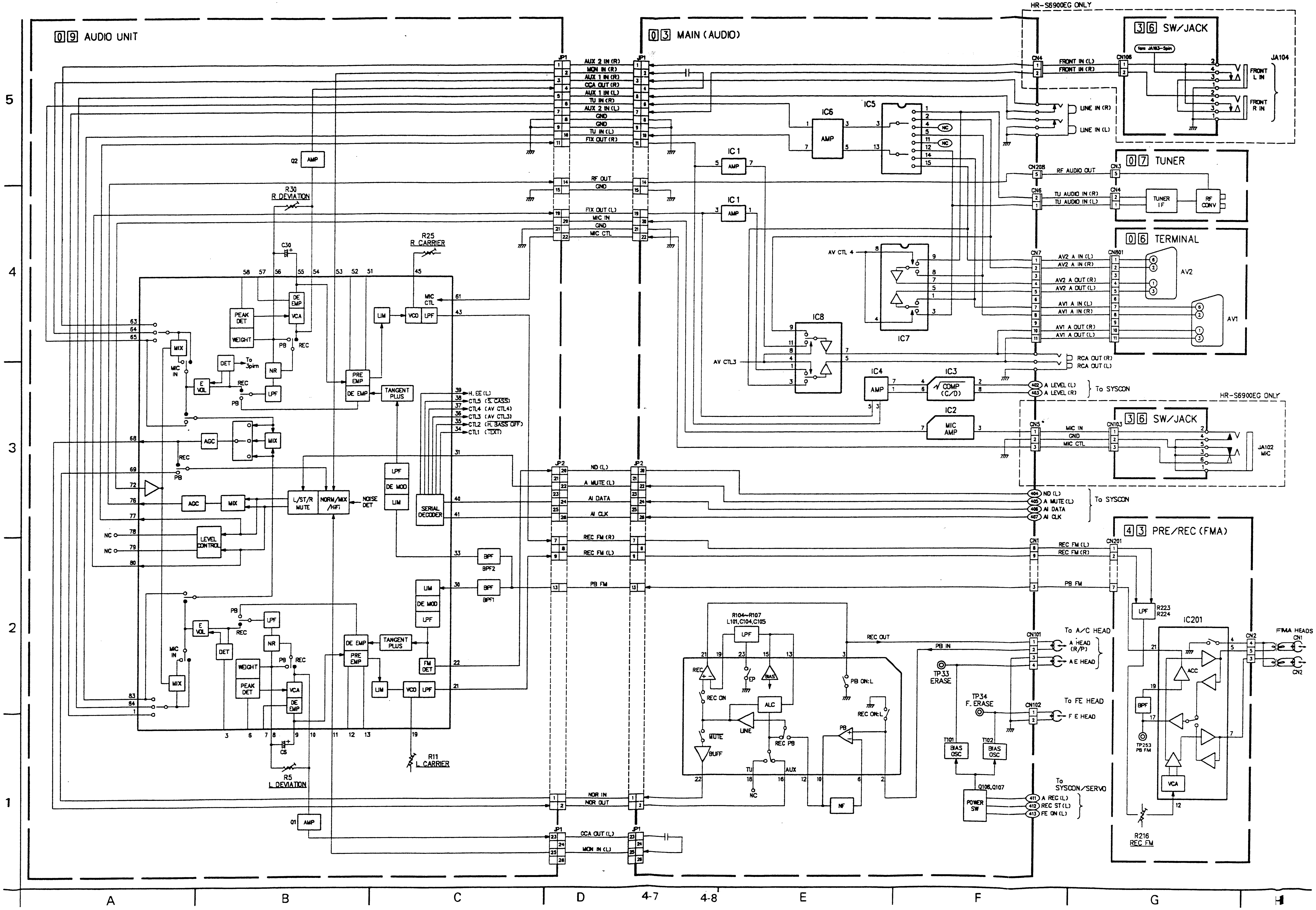
NOTES: 1. < > WR☐ indications on Board Interconnections are as shown below.
< > : Printed board block number in the parts list.
WR☐: Reference number of special wire in the parts list.

4.2 SERVO AND SYSCON BLOCK DIAGRAMS

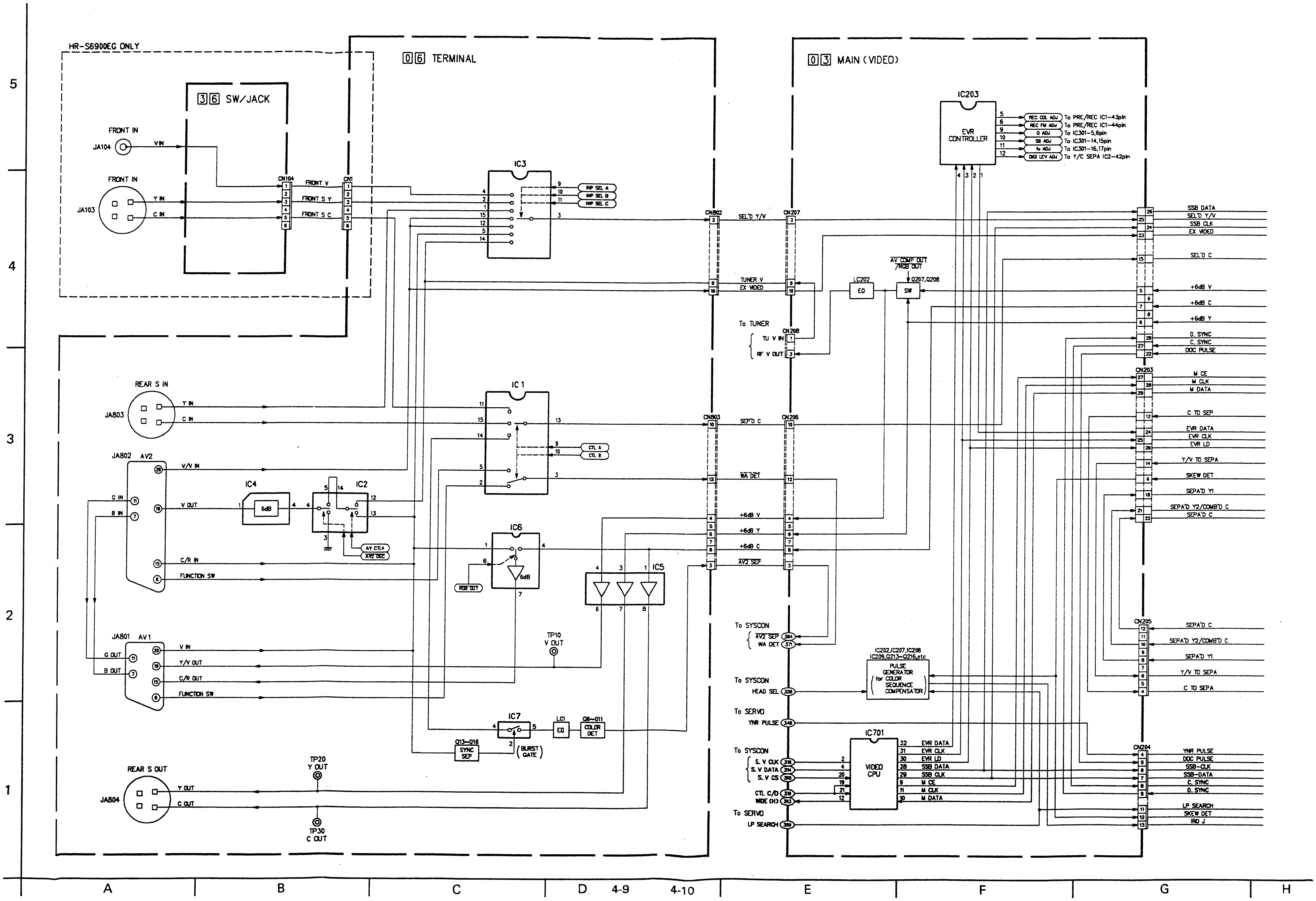


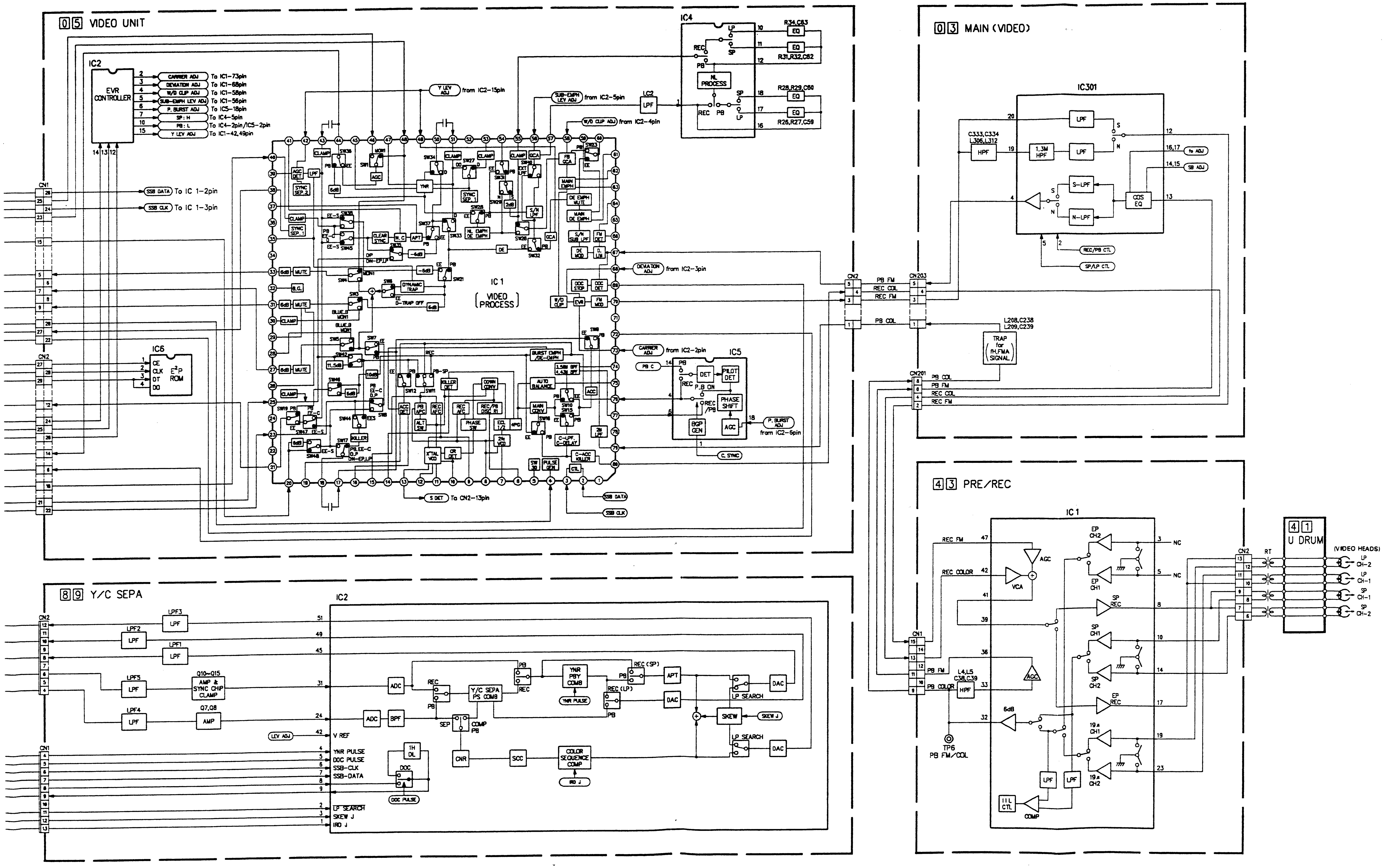
03 MAIN (SYSCON/SERVO)
12 A/C HEAD
CTL
HEAD
CN202
CN401
57 CAPSTAN MDA
CAP FG
CAP CTL
REV L
51 DECK TERMINAL
CN2
58 DRUM MOTOR
CN1
CN402
85 JOG/SHUTTLE
55 LOADING MDA
MOTOR CTL LOGIC
IC1
LOADING MOTOR
IC401
IC401 (SERVO PROCESS CPU)
IC601 (SYSCON CPU)
IC602
EXPANDER
SYSCON SUB PORT (CONTROL DATA OUTPUT)
EXP DATA
EXP CLK
IC474
COUNT DOWN
IC473
LOGIC
IC451
IC472
IC603
MEMORY
DATA 2
DATA 1
CLK
CE
IC604
RESET
AL 5V
Q608
POWER DOWN
Q472
ES
X601
CF601
C619 CLOCK ADJ
TP401 CTL P
TP411 DRUM FF
TP451 AVG FM
R402~R405 C402~C404
N.F
DUTY CTL VISS DET
Fsc
SERIAL DECORDER
C/D
V FM
A PB FM
L451 C453~C455
HPF
HOLD C452
R452,R453 R454,R455
BIAS
S/H
VCA
TIM
OUT
V/I
CTL DELAY
DRUM REF
SYNC SEP
CAP F/V
CAP P/D
DRUM P/D
DRUM F/V
FF VP GEN
CAP P/D FIX MODE: ON
DRUM P/D FIX MODE: ON
1/2Vcc
EXT F V
N.F FILTER R410~R417 C413,C414
CAPSTAN FILTER R418,R419 C415,C416
DRUM FILTER R423,R424 C417,C418
N.F FILTER R429~R432 C419,C420
V PB FM
V CTL
D PG/FG
CAP V CTL
CAP FG
Fsc
AUTO TRACKING FM
C SYNC
349 Fsc
346 AT FM
345 C SYNC
To MAIN (VIDEO)
352 SW 5V
341 A FM
To MAIN (VIDEO)
To MAIN (AUDIO)
SERVO DATA
SERVO CLK
CTL C/D
P DOWN
VP CTL
CLOCK 2
JSB
JSA
CAP FG
DUTY I/D
D FF
SPEED CTL V
DRUM V
CAP V
M DATA
M CE
AVG FM
X2
X1
OSC1
OSC2
RESET
S CLK
EXP DATA
TU FG
SP FG
LCM 1
LCM 2
MECHA DATA
MECHA CLK
THERM
CAP REV
CN601
TU FG
SP FG
CAP V CTL
CN604
CN6
CN101
IC1
ENCORDER
ROTARY ENCORDER
END SENS Q2
START SENS Q1
CASS LOAD END S5
REC SAFF S1
SUP REEL SENS PS2
TU REEL SENS PS1
TH1 THERMISTOR
A
B
C
D
E
F
G
H
1
2
3
4
5

4.3 AUDIO BLOCK DIAGRAM

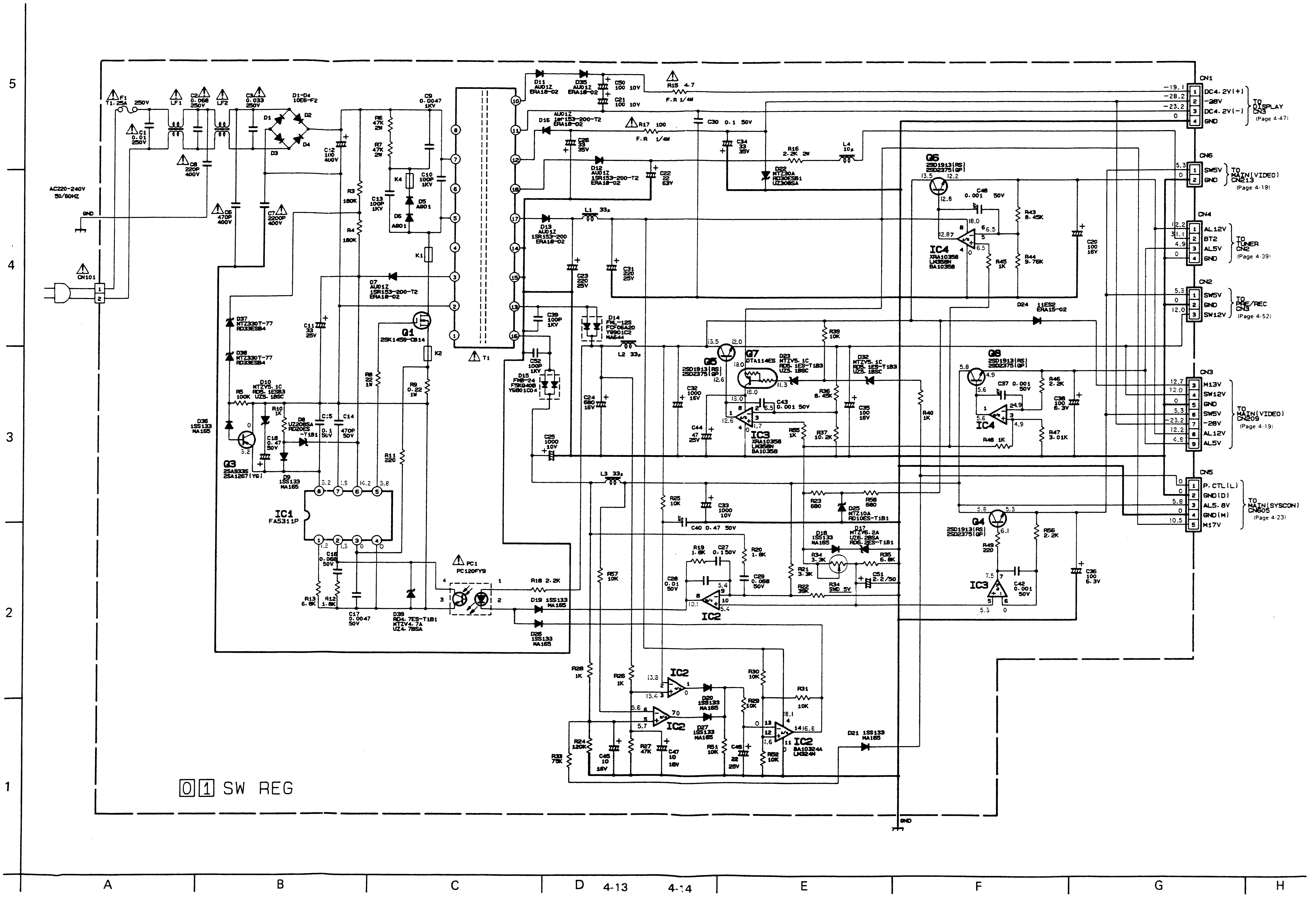

09 AUDIO UNIT
03 MAIN (AUDIO)
HR-S6900EG ONLY
36 SW/JACK
JA104
FRONT L IN
FRONT R IN
FRONT IN (L)
FRONT IN (R)
CN4
CN106
LINE IN (R)
LINE IN (L)
07 TUNER
TUNER IF
RF CONV
RF AUDIO OUT
TU AUDIO IN (R)
TU AUDIO IN (L)
CN208
CN6
CN3
CN4
06 TERMINAL
CN7
CN801
AV2 A IN (L)
AV2 A IN (R)
AV2 A OUT (R)
AV2 A OUT (L)
AV1 A IN (L)
AV1 A IN (R)
AV1 A OUT (R)
AV1 A OUT (L)
AV2
AV1
RCA OUT (R)
RCA OUT (L)
A LEVEL (L)
A LEVEL (R)
To SYSCON
36 SW/JACK
CN5
CN103
MIC IN
GND
MIC CTL
JA102 MIC
ND (L)
A MUTE (L)
AI DATA
AI CLK
To SYSCON
43 PRE/REC (FMA)
CN1
CN201
REC FM (L)
REC FM (R)
PB FM
LPF
R223
R224
IC201
ACC
VCA
BPF
TP253 PB FM
R216 REC FM
CN2
FMA HEADS
CN1
CN2
JP1
AUX 2 IN (R)
MON IN (R)
AUX 1 IN (R)
CCA OUT (R)
AUX 1 IN (L)
TU IN (R)
AUX 2 IN (L)
GND
GND
TU IN (L)
FIX OUT (R)
RF OUT
GND
FIX OUT (L)
MIC IN
GND
MIC CTL
JP2
ND (L)
A MUTE (L)
AI DATA
AI CLK
REC FM (R)
REC FM (L)
PB FM
NOR IN
NOR OUT
CCA OUT (L)
MON IN (L)
IC6
AMP
IC5
IC1
AMP
IC7
AV CTL 4
IC8
AV CTL3
IC4
AMP
IC3
√ COMP (C/D)
IC2
MIC AMP
R104~R107
L101,C104,C105
LPF
REC
REC ON
BIAS
EP
ALC
LINE
MUTE
BUFF
REC PB
TU
AUX
NC
NF
PB
REC ON:L
PB ON:L
REC OUT
PB IN
To A/C HEAD
A HEAD (R/P)
A/E HEAD
TP33 ERASE
TP34 F. ERASE
To FE HEAD
F E HEAD
CN101
CN102
T101 BIAS OSC
T102 BIAS OSC
Q106,Q107
POWER SW
To SYSCON/SERVO
A REC (L)
REC ST (L)
FE ON (L)
Q2 AMP
R30 R DEVIATION
C30
R25 R CARRIER
PEAK DET
WEIGHT
DE EMP
VCA
PB
REC
MIX
MIC IN
DET
To 3pin
E VOL
NR
LPF
PRE EMP
DE EMP
TANGENT PLUS
LIM
VCO
LPF
MIC CTL
H. EE (L)
CTL5 (S. CASS)
CTL4 (AV CTL4)
CTL3 (AV CTL3)
CTL2 (H. BASS OFF)
CTL1 (TEXT)
AGC
MIX
L/ST/R MUTE
NORM/MIX /HiFi
NOISE DET
DE MOD
SERIAL DECODER
LEVEL CONTROL
NC
BPF
BPF2
BPF1
FM DET
R11 L CARRIER
R5 L DEVIATION
C5
Q1 AMP
1
2
3
4
5
A
B
C
D
E
F
G
H

4.4 VIDEO BLOCK DIAGRAM


HR-S6900EG ONLY
36 SW/JACK
FRONT IN
JA104
V IN
FRONT IN
JA103
Y IN
C IN
CN104
CN1
FRONT V
FRONT S Y
FRONT S C
06 TERMINAL
IC3
INP SEL A
INP SEL B
INP SEL C
SEL'D Y/V
CN802
CN207
TUNER V
EX VIDEO
To TUNER
CN208
TU V IN
RF V OUT
REAR S IN
JA803
Y IN
C IN
IC1
CTL A
CTL B
CN803
CN206
SEP'D C
WA DET
JA802 AV2
V/V IN
G IN
B IN
V OUT
IC4
6dB
IC2
AV CTL4
AV2 DEC
C/R IN
FUNCTION SW
IC6
RGB OUT
6dB
IC5
+6dB V
+6dB Y
+6dB C
AV2 SEP
JA801 AV1
V IN
G OUT
B OUT
Y/V OUT
C/R OUT
FUNCTION SW
TP10
V OUT
IC7
LC1
EQ
Q6~Q11
COLOR DET
Q13~Q16
SYNC SEP
(BURST GATE)
REAR S OUT
JA804
Y OUT
C OUT
TP20
Y OUT
TP30
C OUT
03 MAIN (VIDEO)
IC203
EVR CONTROLLER
REC COL ADJ
To PRE/REC IC1-43pin
REC FM ADJ
To PRE/REC IC1-44pin
0 ADJ
To IC301-5,6pin
SB ADJ
To IC301-14,15pin
fo ADJ
To IC301-16,17pin
DIGI LEV ADJ
To Y/C SEPA IC2-42pin
AV COMP OUT
/RGB OUT
Q207,Q208
LC202
EQ
SW
SSB DATA
SEL'D Y/V
SSB CLK
EX VIDEO
SEL'D C
+6dB V
+6dB C
+6dB Y
D. SYNC
C. SYNC
DOC PULSE
CN203
M CE
M CLK
M DATA
C TO SEP
EVR DATA
EVR CLK
EVR LD
Y/V TO SEPA
SKEW DET
SEPA'D Y1
SEPA'D Y2/COMB'D C
SEPA'D C
To SYSCON
AV2 SEP
WA DET
IC202,IC207,IC208
IC209,Q213~Q216,etc
PULSE GENERATOR (for COLOR SEQUENCE COMPENSATOR)
CN205
SEPA'D C
SEPA'D Y2/COMB'D C
SEPA'D Y1
Y/V TO SEPA
C TO SEPA
To SYSCON
HEAD SEL
To SERVO
YNR PULSE
IC701
VIDEO CPU
To SYSCON
S. V CLK
S. V DATA
S. V CS
CTL C/D
WIDE (H)
To SERVO
LP SEARCH
EVR DATA
EVR CLK
EVR LD
SSB DATA
SSB CLK
M CE
M CLK
M DATA
CN204
YNR PULSE
DOC PULSE
SSB-CLK
SSB-DATA
C. SYNC
D. SYNC
LP SEARCH
SKEW DET
IRO J
A
B
C
D
E
F
G
H
1
2
3
4
5

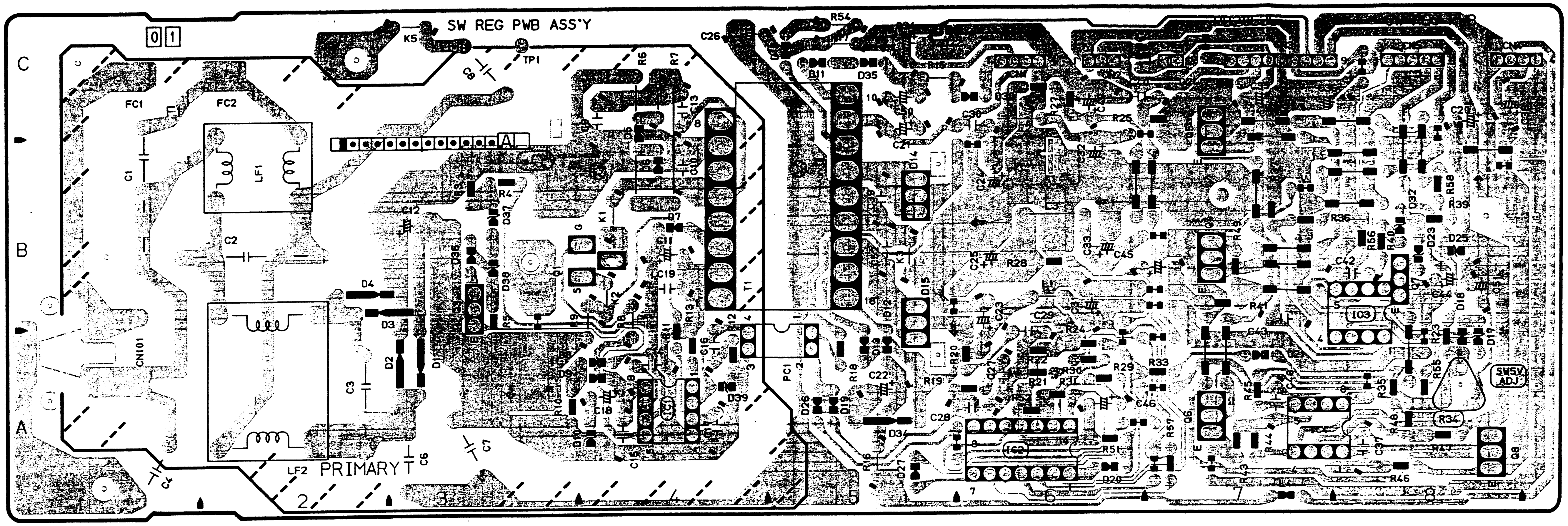

05 VIDEO UNIT
IC2
EVR CONTROLLER
CARRIER ADJ To IC1-73pin
DEVIATION ADJ To IC1-68pin
W/D CLIP ADJ To IC1-58pin
SUB-EMPH LEV ADJ To IC1-56pin
P. BURST ADJ To IC5-18pin
SP : H To IC4-5pin
PB : L To IC4-2pin/IC5-2pin
Y LEV ADJ To IC1-42,49pin
CN1
SSB DATA To IC 1-2pin
SSB CLK To IC 1-3pin
IC6
CE
CLK
DI
DO
E²P ROM
CN2
Y LEV ADJ from IC2-15pin
SUB-EMPH LEV ADJ from IC2-5pin
W/D CLIP ADJ from IC2-4pin
DEVIATION ADJ from IC2-3pin
CARRIER ADJ from IC2-2pin
P. BURST ADJ from IC2-6pin
IC 1 (VIDEO PROCESS)
AGC DET
LPF
SYNC SEP.2
SYNC SEP.1
CLAMP
YNR
AGC
6dB
MUTE
B.G.
CLEAR SYNC
N.C
APT
DYNAMIC TRAP
D-TRAP OFF
DP ON-EP,LP
BLUE.S MON1
NL EMPH DE EMPH
FB GCA
MAIN EMPH
DE EMPH MUTE
MAIN DE EMPH
S/N SUB LPF
FM DET
DE MOD
D. LIM
DOC STOP
DOC DET
W/D CLIP
EMV
FM MOD
GCA
S/N LPF
EXT LPF
BURST EMPH /DE-EMPH
3.58M BPF 4.43M BPF
AUTO BALANCE
MAIN CONV
C-LPF C-DELAY
C-ACC KILLER
CTL
SW 3D
PULSE GEN
KILLER DET
DOWN CONV
REC/PB DISC.R
PHASE SW
ECL 1/2
2fsc VCO
XTAL VCO
CR DET
ACC DET
PB APC
REC AFC
ALT SW
11.5dB
10dB
KILLER
PB EE-C D.P
PB EE-C D.P ON-EP,LP
2M LPF
4PG
S DET To CN2-13pin
SSB DATA
SSB CLK
IC4
REC
PB
LP
SP
NL PROCESS
R34,C83
R31,R32,C82
R28,R29,C60
R26,R27,C59
EQ
LC2
LPF
IC5
PB C
PB
REC
DET
PILOT DET
P.B ON
REC /PB
PHASE SHIFT
BGP GEN
AGC
C. SYNC
03 MAIN (VIDEO)
IC301
C333,C334 L306,L312
HPF
1.3M HPF
LPF
S-LPF
N-LPF
CDS EQ
fo ADJ
SB ADJ
REC/PB CTL
SP/LP CTL
CN2
CN203
PB FM
REC COL
REC FM
PB COL
L208,C238 L209,C239
TRAP for fH,FMA SIGNAL
CN201
43 PRE/REC
IC 1
REC FM
REC COLOR
AGC
VCA
EP CH2
EP CH1
SP REC
SP CH1
SP CH2
EP REC
19a CH1
19a CH2
NC
PB FM
PB COLOR
L4,L5 C38,C39
HPF
6dB
TP6 PB FM/COL
LPF
11L CTL
COMP
41 U DRUM
RT
(VIDEO HEADS)
LP CH-2
LP CH-1
SP CH-1
SP CH-2
89 Y/C SEPA
IC2
LPF1
LPF2
LPF3
LPF4
LPF5
Q10-Q15 AMP & SYNC CHIP CLAMP
Q7,Q8 AMP
ADC
BPF
LEV ADJ
V REF
REC
PB
Y/C SEPA PS COMB
SEP
COMP PB
YNR PBY COMB
YNR PULSE
REC (SP)
REC (LP)
APT
DAC
SKEW
SKEW J
LP SEARCH
CNR
SCC
COLOR SEQUENCE COMP
IRD J
1H DL
DOC
DOC PULSE
YNR PULSE
DOC PULSE
SSB-CLK
SSB-DATA
LP SEARCH
SKEW J
IRD J

4.5 SWITCHING REGULATOR SCHEMATIC DIAGRAM



5
4
3
2
1
A
B
C
D
E
F
G
H
AC220-240V 50/60HZ
GND
CN101
F1 T1.25A 250V
C1 0.01 250V
LF1
C2 0.068 250V
C8 220P 400V
LF2
C3 0.033 250V
C6 470P 400V
C7 2200P 400V
D1-D4 10E6-F2
D1
D2
D3
D4
C12 100 400V
R6 47K 2W
R7 47K 2W
C9 0.0047 1KV
C10 100P 1KV
K4
D5 A901
D6 A901
C13 100P 1KV
R3 180K
R4 180K
K1
K2
D7 AU01Z 1SR153-200-T2 ERA18-02
C11 33 25V
Q1 2SK1459-CB14
R8 22 1W
R9 0.22 1W
R11 220
D37 MTZ330T-77 RD33ESB4
D38 MTZ330T-77 RD33ESB4
R5 100K
D10 MTZV5.1C RD5.1ESB3 UZ5.1BSC
R10 1K
D8 UZ20BSA RD20ES -T1B1
C15 0.1 50V
C14 470P 50V
C18 0.47 50V
D36 1SS133 MA165
Q3 2SA933S 2SA1267(YG)
D9 1SS133 MA165
IC1 FA5311P
C16 0.068 50V
R13 6.8K
R12 1.8K
C17 0.0047 50V
D39 RD4.7ES-T1B1 MTZV4.7A UZ4.7BSA
PC1 PC120FY9
R18 2.2K
D19 1SS133 MA165
D26 1SS133 MA165
T1
D11 AU01Z ERA18-02
D35 AU01Z ERA18-02
C50 100 10V
C21 100 10V
R15 4.7 F.R 1/4W
D16 AU01Z 1SR153-200-T2 ERA18-02
R17 100 F.R 1/4W
C30 0.1 50V
C26 33 35V
C34 33 35V
R16 2.2K 2W
L4 10μ
D12 AU01Z 1SR153-200-T2 ERA18-02
C22 22 63V
D22 MTZ30A RD30ESB1 UZ30BSA
D13 AU01Z 1SR153-200 ERA18-02
L1 33μ
C23 220 25V
C31 220 25V
C39 100P 1KV
D14 FML-12S FCF06A20 YG901C2 MA644
L2 33μ
C52 100P 1KV
D15 FMB-24 FSK040B YG801C04
C24 680 16V
C25 1000 10V
L3 33μ
Q5 2SD1913(RS) 2SD2375(GP)
Q7 DTA114ES
D23 MTZV5.1C RD5.1ES-T1B3 UZ5.1BSC
D32 MTZV5.1C RD5.1ES-T1B3 UZ5.1BSC
R39 10K
C32 1000 16V
R36 6.45K
C35 100 16V
C43 0.001 50V
C44 47 25V
IC3 XRA10358 LM358N BA10358
R55 1K
R37 10.2K
R40 1K
R25 10K
C33 1000 10V
C40 0.47 50V
R23 680
R58 680
D25 MTZ10A RD10ES-T1B1
D18 1SS133 MA165
D17 MTZV6.2A UZ6.2BSA RD6.2ES-T1B1
R34 3.3K
R35 6.8K
R19 1.8K
C27 0.1 50V
R20 1.8K
C28 0.01 50V
C29 0.068 50V
R57 10K
R21 3.3K
R22 39K
R34 SWD 5V
C51 2.2/50
IC2
R28 1K
R26 1K
R30 10K
R31 10K
D20 1SS133 MA165
D27 1SS133 MA165
R29 10K
R24 120K
R33 75K
C45 10 16V
R27 47K
C47 10 16V
R51 10K
C46 22 25V
R52 10K
IC2 BA10324A LM324N
D21 1SS133 MA165
Q6 2SD1913(RS) 2SD2375(GP)
C48 0.001 50V
R43 8.45K
R44 9.76K
R45 1K
IC4 XRA10358 LM358N BA10358
C20 100 16V
D24 11ES2 ERA15-02
Q8 2SD1913(RS) 2SD2375(GP)
C37 0.001 50V
R46 2.2K
C38 100 6.3V
R48 1K
R47 3.01K
IC4
Q4 2SD1913(RS) 2SD2375(GP)
R56 2.2K
R49 220
C36 100 6.3V
IC3
C42 0.001 50V
CN1
DC4.2V(+)
-28V
DC4.2V(-)
GND
TO DISPLAY CN3 (Page 4-47)
CN6
SW5V
GND
TO MAIN(VIDEO) CN213 (Page 4-19)
CN4
AL12V
BT2
AL5V
GND
TO TUNER CN2 (Page 4-39)
CN2
SW5V
GND
SW12V
TO PRE/REC CN3 (Page 4-52)
CN3
M13V
SW12V
GND
SW5V
-28V
AL12V
AL5V
TO MAIN(VIDEO) CN209 (Page 4-19)
CN5
P.CTL(L)
GND(D)
AL5.8V
GND(M)
M17V
TO MAIN(SYSCON) CN605 (Page 4-23)
GND
01 SW REG

4.6 SWITCHING REGULATOR CIRCUIT BOARD


SW REG PWB ASS'Y
01
C
B
A
FC1
FC2
F1
C1
C2
C3
C4
C6
C7
C8
LF1
LF2
PRIMARY
CN101
D2
D3
D4
K1
K5
TP1
T1
PC1
IC1
IC2
IC3
R34
SWSV ADJ
2
3
4
5
6
7
8

MAIN COMPONENT PARTS LOCATION GUIDE
<SW REG BOARD>

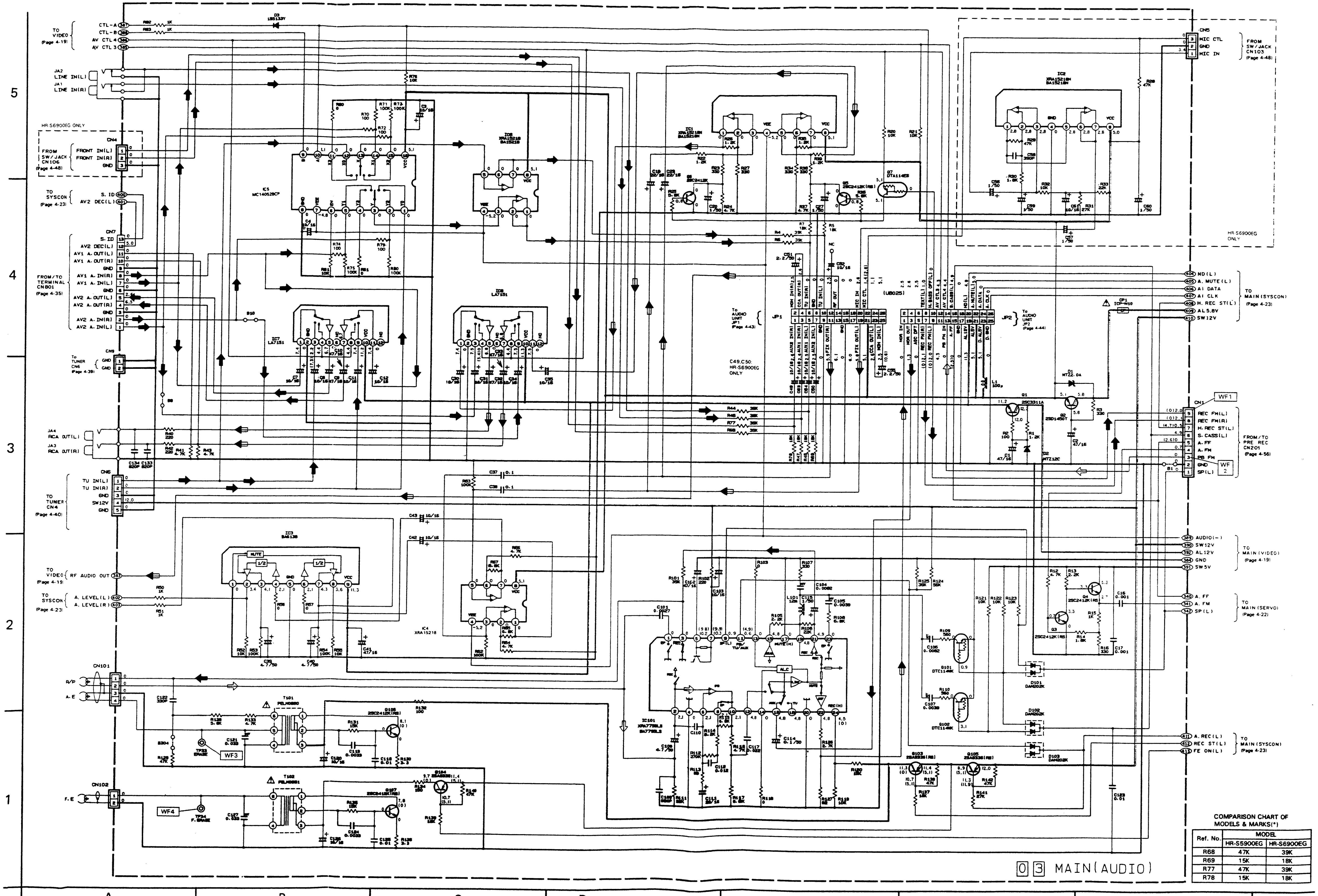
REF No.	LOCATION
IC	
IC1	4A
IC2	6A
IC3	8B
IC4	7A
TRANSISTOR	
Q1	3B
Q3	3B
Q4	7B
Q5	7C
Q6	7A
Q7	8B
Q8	8A

REF No.	LOCATION
DIODE	
D1	3A
D2	3A
D3	3B
D4	2B
D5	4C
D6	4B
D7	4B
D8	4A
D9	4A
D10	4A
D11	5C
D12	5B
D13	5A
D14	5B
D15	5B
D16	5C
D17	8A

REF No.	LOCATION
DIODE	
D18	8A
D19	5A
D20	6A
D21	7A
D22	5C
D23	8B
D24	7C
D25	8B
D26	5A
D27	4A
D32	8B
D35	5C
D36	3B
D37	3B
D38	3B
D39	4A

REF No.	LOCATION
CONNECTOR	
CN1	6C
CN2	6C
CN3	7C
CN4	8C
CN5	8C
CN6	7C
CN101	1A
ADJUSTMENT	
R34	8A

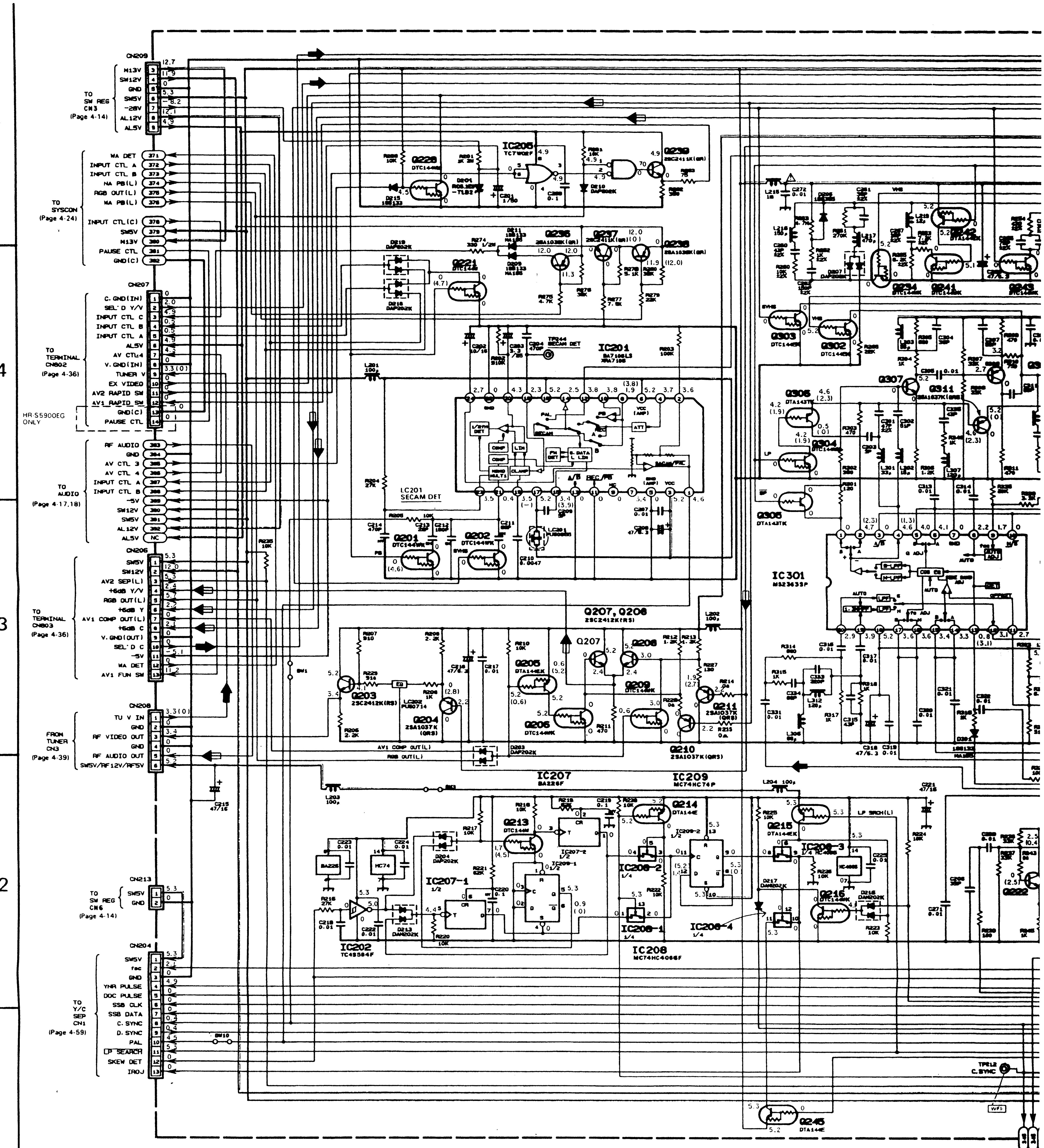
4.7 AUDIO SCHEMATIC DIAGRAM


5
4
3
2
1
TO VIDEO (Page 4-19)
CTL-A
CTL-B
AV CTL 4
AV CTL 3
JA2 LINE IN(L)
JA1 LINE IN(R)
HR-S6900EG ONLY
CN4
FROM SW/JACK CN106 (Page 4-48)
FRONT IN(L)
FRONT IN(R)
GND
TO SYSCON (Page 4-23)
S. ID
AV2 DEC(L)
CN7
FROM/TO TERMINAL CN801 (Page 4-35)
AV2 DEC(L)
AV1 A. OUT(L)
AV1 A. OUT(R)
AV1 A. IN(R)
AV1 A. IN(L)
AV2 A. OUT(L)
AV2 A. OUT(R)
AV2 A. IN(R)
AV2 A. IN(L)
CN9
To TUNER CN6 (Page 4-39)
JA4 RCA OUT(L)
JA3 RCA OUT(R)
CN8
TU IN(L)
TU IN(R)
GND
SW12V
TO TUNER CN4 (Page 4-40)
TO VIDEO (Page 4-19)
RF AUDIO OUT
TO SYSCON (Page 4-23)
A. LEVEL(L)
A. LEVEL(R)
CN101
R/P
A-E
CN102
F.E
WF3
WF4
TP33 ERASE
TP34 F.ERASE
T101 PELX0880
T102 PELX0881
IC5 MC14052BCP
IC6 XRA15218 BA15218
IC7 LA7151
IC8 LA7151
IC3 BA6138
MUTE
IC4 XRA15218
IC1 XRA15218N BA15218N
Q7 DTA114ES
IC2 XRA15218N BA15218N
CN5
MIC CTL
GND
MIC IN
FROM SW/JACK CN103 (Page 4-48)
HR-S6900EG ONLY
To AUDIO UNIT JP1 (Page 4-43)
JP1
(UB025)
JP2
To AUDIO UNIT JP2 (Page 4-44)
C49,C50: HR-S6900EG ONLY
ND(L)
A. MUTE(L)
AI DATA
AI CLK
H. REC ST(L)
AL5.8V
SW12V
TO MAIN(SYSCON) (Page 4-23)
CP1 ICP-N10
D1 MTZ2.0A
Q1 2SC3311A
Q2 2SD1450T
D2 MTZ12C
CN1
WF1
REC FM(L)
REC FM(R)
H. REC ST(L)
S. CASS(L)
A. FF
A. FM
PB FM
GND
SP(L)
WF2
FROM/TO PRE REC CN201 (Page 4-56)
AUDIO(-)
SW12V
AL12V
GND
SW5V
TO MAIN(VIDEO) (Page 4-19)
A. FF
A. FM
SP(L)
TO MAIN(SERVO) (Page 4-22)
Q4 2SC2412K(RS)
Q3 2SC2412K(RS)
A. REC(L)
REC ST(L)
FE ON(L)
TO MAIN(SYSCON) (Page 4-23)
IC101 XRA7788LS BA7788LS
ALC
Q101 DTC114EK
Q102 DTC114EK
D101 DAN202K
D102 DAN202K
D103 DAN202K
Q103 2SA933S(RS)
Q105 2SA933S(RS)
Q106 2SC2412K(RS)
Q107 2SC2412K(RS)
Q104 2SA933S(RS)
03 MAIN(AUDIO)
A
B
C
D
E
F
G
H

COMPARISON CHART OF MODELS & MARKS(*)

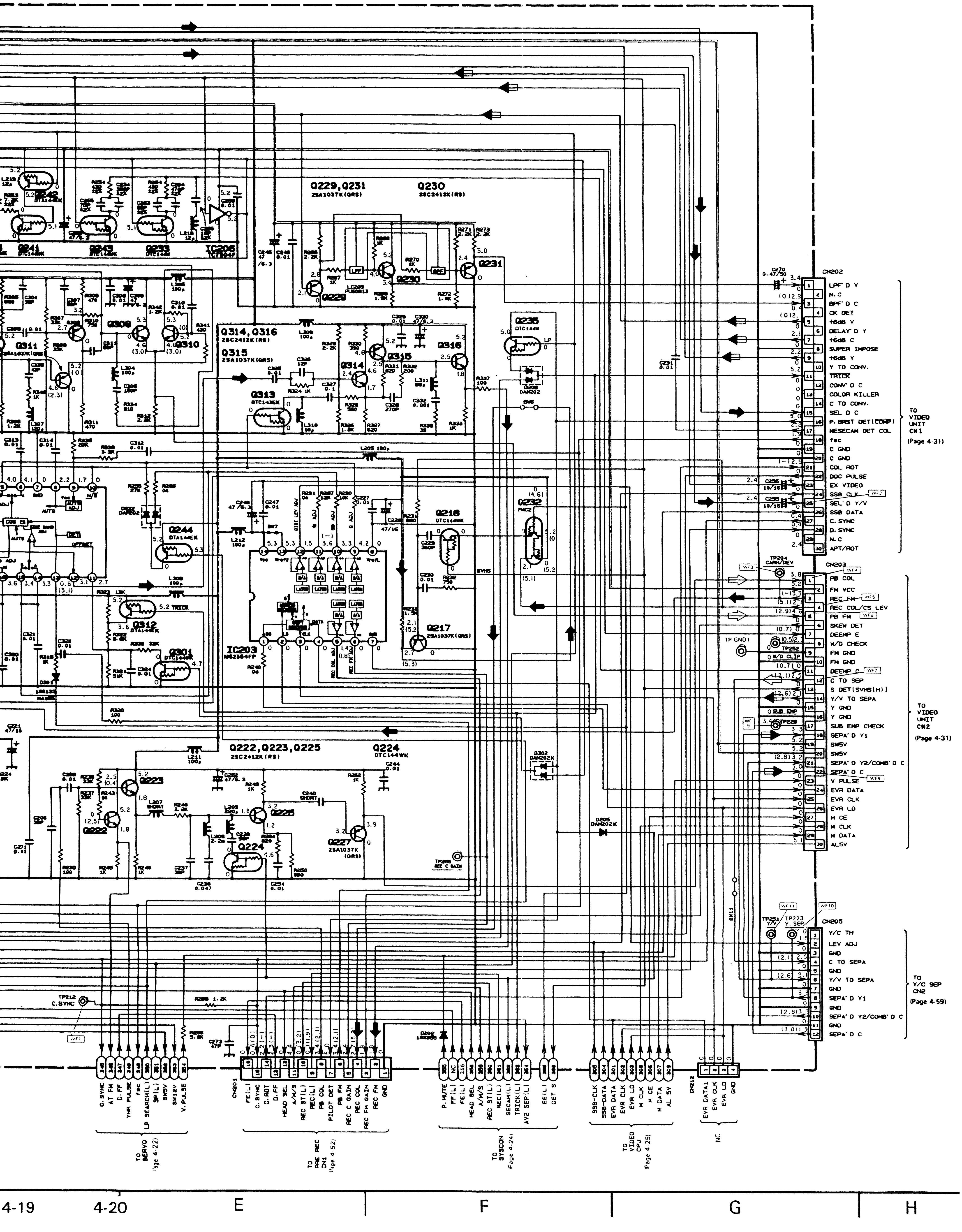
Ref. No.	MODEL	
	HR-S5900EG	HR-S6900EG
R68	47K	39K
R69	15K	18K
R77	47K	39K
R78	15K	18K

4.8 VIDEO SCHEMATIC DIAGRAM

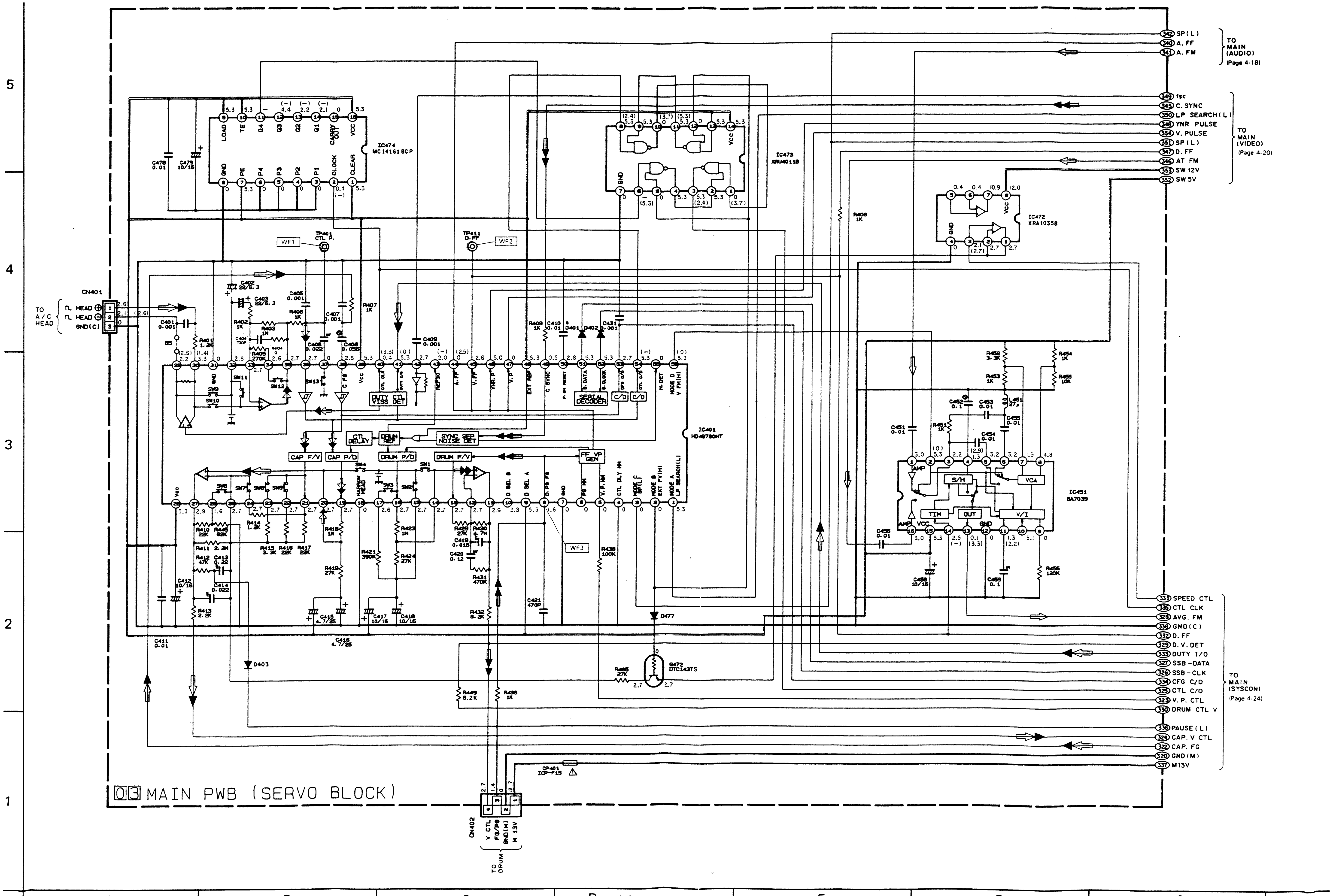


CN209
M13V
SW12V
GND
SW5V
-28V
AL12V
AL5V
TO SW REG CN3 (Page 4-14)
12.7
11.9
5.3
-8.2
12.1
4.9
MA DET
INPUT CTL A
INPUT CTL B
MA PB(L)
RGB OUT(L)
MA PB(L)
INPUT CTL(C)
SW5V
M13V
PAUSE CTL
GND(C)
371
372
373
374
375
376
378
379
380
381
382
TO SYSCON (Page 4-24)
CN207
C. GND(IN)
SEL'D Y/V
INPUT CTL C
INPUT CTL B
INPUT CTL A
AL5V
AV CTL4
V. GND(IN)
TUNER V
EX VIDEO
AV2 RAPID SW
AV1 RAPID SW
GND(C)
PAUSE CTL
TO TERMINAL CN802 (Page 4-36)
HR-S5900EG ONLY
RF AUDIO
GND
AV CTL 3
AV CTL 4
INPUT CTL A
INPUT CTL B
-5V
SW12V
SW5V
AL12V
AL5V
383
384
385
386
387
388
389
390
391
392
NC
TO AUDIO (Page 4-17,18)
CN206
SW5V
SW12V
AV2 SEP(L)
+6dB Y/V
RGB OUT(L)
+6dB Y
AV1 COMP OUT(L)
+6dB C
V. GND(OUT)
SEL'D C
-5V
MA DET
AV1 FUN SW
TO TERMINAL CN803 (Page 4-36)
CN208
TU V IN
GND
RF VIDEO OUT
GND
RF AUDIO OUT
SW5V/RF12V/RF5V
FROM TUNER CN3 (Page 4-39)
CN213
SW5V
GND
TO SW REG CN6 (Page 4-14)
CN204
SW5V
rec
GND
YNR PULSE
DOC PULSE
SSB CLK
SSB DATA
C. SYNC
D. SYNC
PAL
LP SEARCH
SKEW DET
IROJ
TO Y/C SEP CN1 (Page 4-59)
IC205
TC7W02F
Q226
DTC144WK
D201
D215
Q239
2SC2411K(QR)
D210
DAP202K
Q221
DTC144E
D219
DAP202K
D218
DAP202K
D211
D209
Q236
2SA1036K(QR)
Q237
2SC2411K(QR)
Q238
2SA1036K(QR)
IC201
BA7106LS
XRA7106
TP244
SECAM DET
LC201
SECAM DET
PAL
SECAM
ATT
VCC
A/B
REC/PB
Q201
DTC144WK
Q202
DTC144WK
SVHS
PB
Q207, Q208
2SC2412K(RS)
Q203
2SC2412K(RS)
Q204
2SA1037K (QRS)
Q205
DTA144EK
Q206
DTC144WK
Q209
DTC144WK
Q211
2SA1037K (QRS)
Q210
2SA1037K(QRS)
LC202
D203
DAP202K
AV1 COMP OUT(L)
RGB OUT(L)
SW1
SW3
SW10
IC207
BA226F
IC209
MC74HC74P
Q213
DTC144W
Q214
DTA144E
Q215
DTA144EK
Q216
DTC144WK
IC207-1
IC207-2
IC209-1
IC209-2
IC208-1
IC208-2
IC208-3
IC208-4
IC208
MC74HC4066F
IC202
TC4S584F
D204
DAP202K
D213
DAM202K
D217
DAM202K
D216
DAM202K
LP SRCH(L)
Q245
DTA144E
TP212
C.SYNC
WF1
D.SYNC AT FM
Q303
DTC144EK
Q302
DTC144EK
Q234
DTC144EK
Q241
DTC144EK
Q242
DTA144EK
Q243
DTC144EK
Q306
DTA143TK
Q304
DTC144EK
Q305
DTA143TK
Q307
Q311
2SA1037K(QRS)
IC301
M52363SP
AUTO
Q222
SVHS
VHS
LP
SP

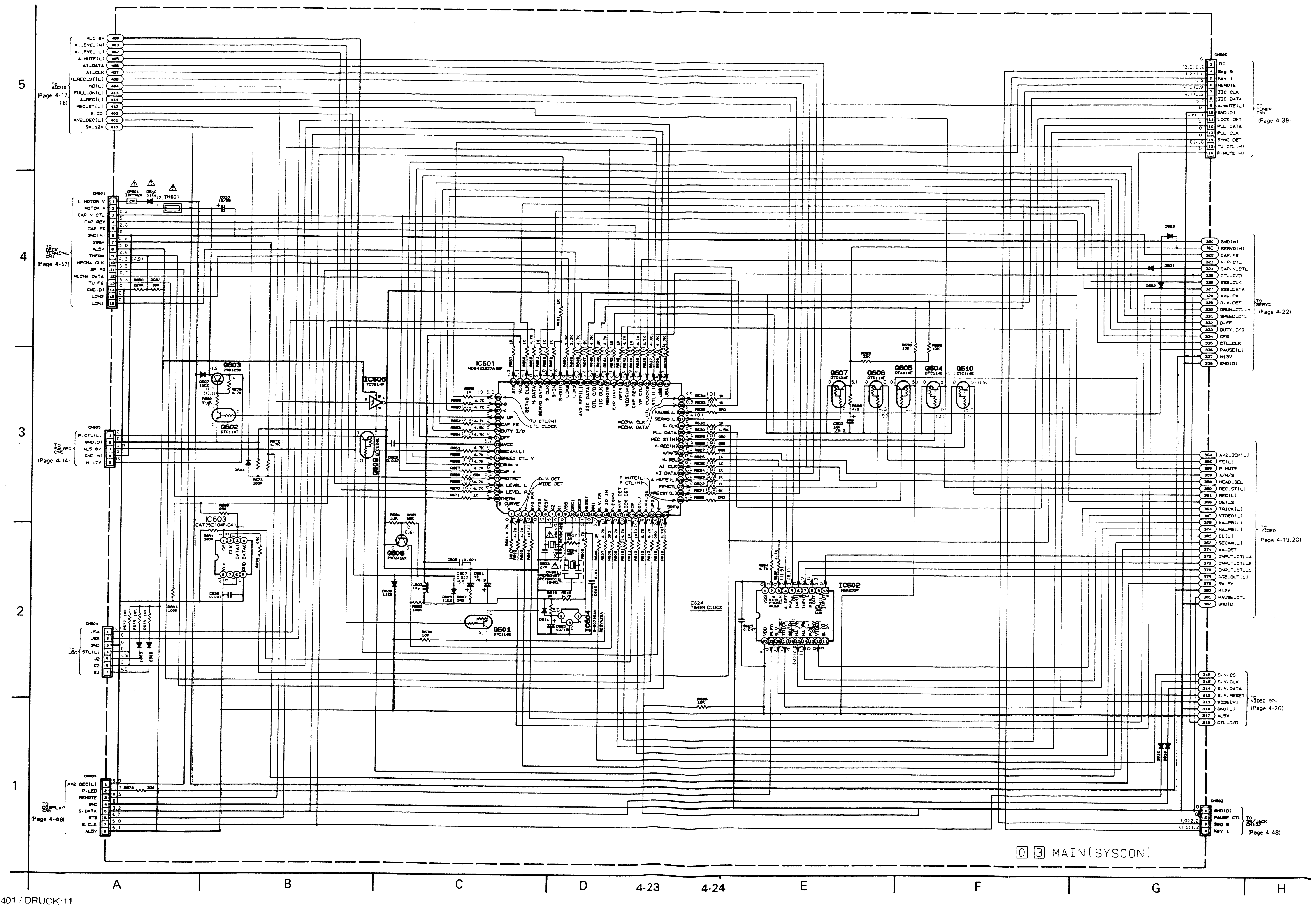
NOTES: ALL NPN TYPE TRANSISTORS ARE 2SC2412K(RS).
ALL PNP TYPE TRANSISTORS ARE 2SA1037K(QRS).


Q229,Q231
2SA1037K(QRS)
Q230
2SC2412K(RS)
Q314,Q316
2SC2412K(RS)
Q315
2SA1037K(QRS)
Q313
DTC143EK
Q235
DTC144W
D208
DAN202
Q218
DTC144WK
Q232
FNC2
Q217
2SA1037K(QRS)
IC203
M62354FP
IC205
Q244
DTA144EK
Q312
DTA144EK
Q301
DTC144WK
Q311
Q309
Q310
Q241
Q243
Q233
Q222,Q223,Q225
2SC2412K(RS)
Q224
DTC144WK
Q227
2SA1037K(QRS)
D302
DAN202K
D205
DAN202K
D202
1SS355
TP255
REC C GAIN
TP212
C.SYNC
TP204
CARR/DEV
TP GND1
TP252
TP226
TP251
Y/V
TP223
Y SEP
CN202
LPF'D Y
N.C
BPF'D C
CK DET
+6dB V
DELAY'D Y
+6dB C
SUPER IMPOSE
+6dB Y
Y TO CONV.
TRICK
CONV'D C
COLOR KILLER
C TO CONV.
SEL D C
P.BRST DET(COMP)
MESECAM DET COL
fsc
C GND
C GND
COL ROT
DOC PULSE
EX VIDEO
SSB CLK
SEL'D Y/V
SSB DATA
C. SYNC
D. SYNC
N.C
APT/ROT
TO VIDEO UNIT CN1
(Page 4-31)
CN203
PB COL
FM VCC
REC FM
REC COL/CS LEV
PB FM
SKEW DET
DEEMP E
W/D CHECK
FM GND
FM GND
DEEMP C
C TO SEP
S DET(SVHS(H))
Y/V TO SEPA
Y GND
Y GND
SUB EMP CHECK
SEPA'D Y1
SW5V
SW5V
SEPA'D Y2/COMB'D C
SEPA'D C
V PULSE
EVR DATA
EVR CLK
EVR LD
M CE
M CLK
M DATA
AL5V
TO VIDEO UNIT CN2
(Page 4-31)
CN205
Y/C TH
LEV ADJ
GND
C TO SEPA
GND
Y/V TO SEPA
GND
SEPA'D Y1
GND
SEPA'D Y2/COMB'D C
GND
SEPA'D C
TO Y/C SEP CN2
(Page 4-59)
C.SYNC
AT FM
D.FF
YNR PULSE
fsc
LP SEARCH(L)
SP(L)
SW5V
SW12V
V.PULSE
TO SERVO
(Page 4-22)
CN201
FE(L)
C.ROT
D.FF
HEAD SEL
A/K/S
REC ST(L)
PB COL
PILOT DET
PB FM
REC C GAIN
REC COL
REC FM GAIN
REC FM
GND
TO PRE REC CN1
(Page 4-52)
P.MUTE
NC
FF(L)
FE(L)
HEAD SEL
A/K/S
REC ST(L)
REC(L)
SECAM(L)
TRICK(L)
AV2 SEP(L)
EE(L)
DET S
TO SYSCON
(Page 4-24)
SSB-CLK
SSB-DATA
EVR DATA
EVR CLK
EVR LD
M CLK
M CE
M DATA
AL 5V
TO VIDEO CPU
(Page 4-25)
CN212
EVR DATA1
EVR CLK
EVR LD
GND
NC
BW11
4-19
4-20
E
F
G
H

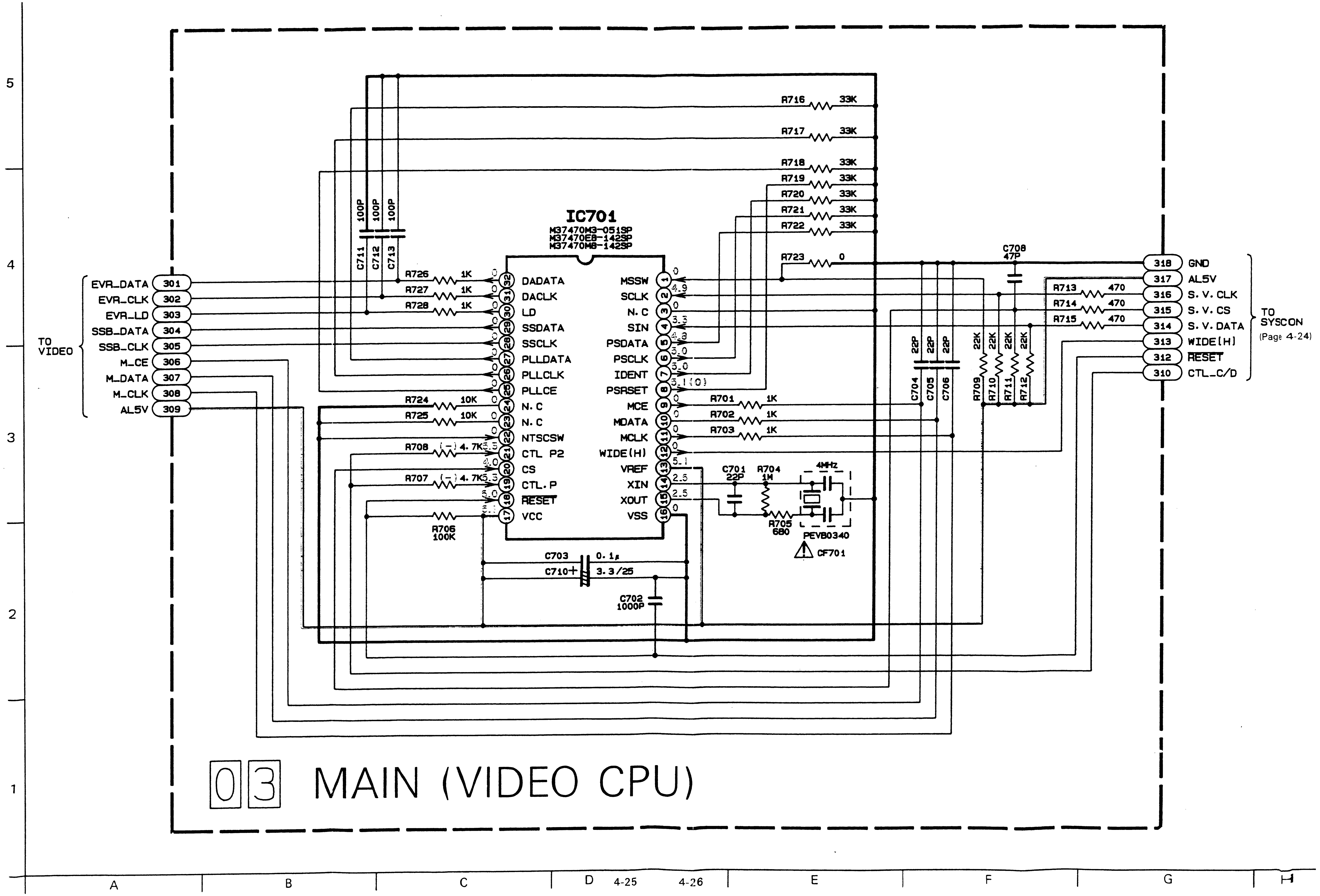
4.9 SERVO SCHEMATIC DIAGRAM


5
4
3
2
1
A
B
C
D
E
F
G
H
CN401
TO A/C HEAD
TL HEAD ⊕
TL HEAD ⊖
GND(C)
IC474 MC14161BCP
LOAD
TE
Q4
Q3
Q2
Q1
CARRY OUT
VCC
GND
PE
P4
P3
P2
P1
CLOCK
CLEAR
C478 0.01
C479 10/16
IC473 XRU4011B
IC472 XRA10358
TP401 CTL P.
TP411 D.FF
WF1
WF2
WF3
IC401 HD49780NT
DUTY CTL VISS DET
SERIAL DECODER
CTL DELAY
DRUM REF
SYNC SEP NOISE DET
CAP F/V
CAP P/D
DRUM P/D
DRUM F/V
FF VP GEN
IC451 BA7039
AMP
S/H
VCA
TIM
OUT
V/I
R408 1K
D401
D402
D403
D477
Q472 DTC143TS
CP401 ICP-F15
342 SP(L)
340 A. FF
341 A. FM
TO MAIN (AUDIO) (Page 4-18)
349 fsc
345 C. SYNC
350 LP SEARCH(L)
348 YNR PULSE
354 V. PULSE
351 SP(L)
347 D. FF
346 AT FM
353 SW 12V
352 SW 5V
TO MAIN (VIDEO) (Page 4-20)
331 SPEED CTL
335 CTL CLK
328 AVG. FM
336 GND(C)
332 D. FF
329 D. V. DET
333 DUTY I/O
327 SSB-DATA
326 SSB-CLK
334 CFG C/D
325 CTL C/D
323 V. P. CTL
330 DRUM CTL V
TO MAIN (SYSCON) (Page 4-24)
339 PAUSE(L)
324 CAP. V CTL
322 CAP. FG
320 GND(M)
337 M13V
Q3 MAIN PWB (SERVO BLOCK)
CN402
V CTL
FG/PG
GND(M)
M 13V
TO DRUM

4.10 SYSTEM CONTROL SCHEMATIC DIAGRAM


IC601
HD6433827A68F
IC602
IC603
CAT35C104P-041
IC604
IC605
TC7S14F
Q501
Q502
DTC114T
Q503
Q506
Q507
Q508
Q509
Q510
CN601
TO DECK TERMINAL CN1 (Page 4-57)
CN602
TO SW/JACK CN102 (Page 4-48)
CN603
TO DISPLAY CN1 (Page 4-48)
CN604
TO JOG
CN605
TO SW. REG CN5 (Page 4-14)
CN606
TO TUNER CN1 (Page 4-39)
TO AUDIO (Page 4-17, 18)
TO SERVO (Page 4-22)
TO VIDEO (Page 4-19, 20)
TO VIDEO CPU (Page 4-26)
C624
TIMER CLOCK
03 MAIN(SYSCON)
A
B
C
D
E
F
G
H
1
2
3
4
5

4.11 VIDEO CPU SCHEMATIC DIAGRAM


IC701
M37470M3-051SP
M37470E8-142SP
M37470M8-142SP
DADATA
DACLK
LD
SSDATA
SSCLK
PLLDATA
PLLCLK
PLLCE
N.C
N.C
NTSCSW
CTL P2
CS
CTL.P
RESET
VCC
MSSW
SCLK
N.C
SIN
PSDATA
PSCLK
IDENT
PSRSET
MCE
MDATA
MCLK
WIDE(H)
VREF
XIN
XOUT
VSS
R716 33K
R717 33K
R718 33K
R719 33K
R720 33K
R721 33K
R722 33K
R723 0
R726 1K
R727 1K
R728 1K
R724 10K
R725 10K
R708 (-) 4.7K
R707 (-) 4.7K
R706 100K
R701 1K
R702 1K
R703 1K
R704 1M
R705 680
R713 470
R714 470
R715 470
R709 22K
R710 22K
R711 22K
R712 22K
C711 100P
C712 100P
C713 100P
C704 22P
C705 22P
C706 22P
C708 47P
C701 22P
C703 0.1μ
C710 3.3/25
C702 1000P
4MHz
PEVB0340
CF701
TO VIDEO
EVR_DATA 301
EVR_CLK 302
EVR_LD 303
SSB_DATA 304
SSB_CLK 305
M_CE 306
M_DATA 307
M_CLK 308
AL5V 309
318 GND
317 AL5V
316 S.V.CLK
315 S.V.CS
314 S.V.DATA
313 WIDE(H)
312 RESET
310 CTL_C/D
TO SYSCON
(Page 4-24)
03 MAIN (VIDEO CPU)
5
4
3
2
1
A
B
C
D
E
F
G
H

4.12 MAIN CIRCUIT BOARD

MAIN COMPONENT PARTS LOCATION GUIDE <MAIN PWB>

REF No.	LOCATION
IC	
IC1	6L
IC2	3L
IC3	10I
IC4	8I
IC5	9M
IC6	7L
IC7	9L
IC8	9J
IC101	5J
IC201	19B
IC202	22F
IC203	18C
IC205	17O
IC206	17F
IC207	22E
IC208	22D
IC209	22E
IC301	16K
IC401	14H
IC451	12F
IC472	16J
IC473	10E
IC474	11D
IC601	6E
IC602	7B
IC603	8B
IC604	7C
IC605	5B
IC701	16E
TRANSISTOR	
Q1	10K
Q2	1L
Q3	12K
Q4	11J
Q5	7L
Q6	5L
Q7	7L
Q101	5H
Q102	4I
Q103	4J
Q104	3J
Q105	3J
Q106	2I
Q107	2K
Q201	17B
Q202	17A
Q203	20O
Q204	21M
Q205	20N
Q206	20N
Q207	21O
Q208	21O
Q209	21N
Q210	21N
Q211	21N
Q213	22F
Q214	22C
Q215	21H
Q216	21G
Q217	19G
Q218	20G
Q221	15O
Q222	20C
Q223	20C
Q224	20D
Q225	21D
Q227	20B
Q228	18O
Q229	21M
Q230	20M
Q231	21M
Q232	19G
Q233	18F
Q234	17G
Q235	19I
Q236	14N
Q237	13O
Q238	14N
Q239	17O

REF No.	LOCATION
TRANSISTOR	
Q241	17G
Q242	17G
Q243	18F
Q244	17C
Q245	21A
Q301	17K
Q302	18M
Q303	17L
Q304	16M
Q305	16M
Q306	16M
Q307	16M
Q308	17M
Q309	18N
Q310	17M
Q311	16M
Q312	18K
Q313	19L
Q314	19L
Q315	18L
Q316	19M
Q472	16G
Q472	16G
Q601	8C
Q602	3E
Q603	2E
Q604	7F
Q605	7E
Q606	7E
Q607	6G
Q608	4B
Q609	2D
Q610	7F
DIODE	
D1	1L
D2	11K
D3	8F
D11	3O
D12	4O
D101	7I
D102	7H
D103	3J
D201	14M
D202	17F
D203	20N
D204	22G
D205	20I
D206	18G
D207	18G
D208	20I
D209	14N
D210	20O
D211	15N
D213	21E
D215	14O
D216	21G
D217	21G
D218	15N
D219	15O
D222	17C
D301	17K
D302	18L
D401	16I
D402	16I
D403	10F
D477	16G
D601	9E
D602	9E
D603	9E
D604	5G
D605	2D
D606	2D
D607	2G
D608	5B
D609	5B
D610	2G
D611	7C
D612	2A
D613	2A
D614	2A

REF No.	LOCATION
CONNECTOR	
CN1	8M
CN4	9N
CN5	4L
CN6	10N
CN7	7O
CN9	4O
CN101	7I
CN102	2I
CN201	16K
CN202	19J
CN203	19F
CN204	21I
CN205	20F
CN206	19O
CN207	17O
CN208	12N
CN209	14C
CN212	18C
CN213	21J
CN401	13J
CN402	1I
CN601	1G
CN602	18D
CN603	2B
CN604	1C
CN605	1E
CN606	13N
TEST POINT	
TP33	2H
TP34	2I
TP204	17I
TP212	18I
TP223	20F
TP226	19F
TP244	18B
TP251	20F
TP252	19F
TP255	19D
TP401	17F
TP411	18D
TP424	13J
TPGND1	19F
CP	
CP1	3G
CP401	1H
CP601	2G

LEADLESS COMPONENT PARTS LOCATION GUIDE <MAIN PWB>

• FMA AUDIO

REF No.	LOCATION
TRANSISTOR	
Q3	12K
Q4	11J
Q5	7L
Q6	6L
Q101	5H
Q102	4I
Q106	2I
Q107	2K
DIODE	
D101	7I
D102	7H
D103	3J
RESISTOR	
R1	10K
R2	10K
R3	1L
R4	6M
R5	6M
R6	6M
R7	6M
R12	12K
R13	12K
R14	11K
R15	11J
R16	11J
R20	7L
R21	7K
R22	6M
R23	6L
R24	6L
R25	5L
R26	5L
R27	5L
R28	3K
R29	4L
R30	4K
R31	3K
R32	4K
R33	3K
R34	6L
R35	6L
R36	7L
R37	6L
R38	6L
R39	6M
R40	5O
R41	6O
R42	4O
R43	6O
R44	6N
R45	6N
R46	7N
R47	6N
R50	9I
R51	11I
R52	10J
R53	10J
R54	10J
R55	11J
R56	9I
R57	9I
R58	9J
R59	9J
R60	9M
R61	9M
R62	9I
R63	9I
R64	8I
R65	8I
R66	8I
R67	8I
R68	6N
R69	6N
R70	9M
R71	9M
R72	8M
R73	9M
R74	9N

REF No.	LOCATION
RESISTOR	
R75	9M
R76	10L
R77	7N
R78	7N
R79	8N
R80	8M
R81	9M
R82	9F
R83	9F
R84	9K
R101	6I
R103	5I
R104	5I
R105	5I
R106	5I
R107	4H
R108	4J
R109	5H
R110	4I
R111	7J
R112	6J
R113	6J
R114	6J
R115	5J
R116	5J
R117	5J
R118	5J
R119	4I
R120	4J
R121	6H
R122	6H
R123	6H
R124	4J
R125	4J
R126	4M
R127	4M
R128	4H
R129	3H
R130	2I
R131	2I
R132	3I
R133	2I
R134	3J
R135	2J
R136	2K
R137	4J
R138	4J
R139	3J
R140	3J
R141	3J
R142	3J
CAPACITOR	
C5	8M
C6	7M
C16	11J
C17	11J
C19	5C
C28	6L
C37	11O
C38	12O
C44	8I
C45	8I
C58	4K
C101	6I
C109	7J
C110	6J
C112	6J
C113	5J
C116	4N
C117	5J
C118	3I
C119	3I
C122	4H
C123	7H
C124	2J
C125	2K
C131	2O
C133	4O
C134	5O

• VIDEO

REF No.	LOCATION
IC	
IC202	22F
IC203	18C
IC205	17O
IC206	17F
IC207	22E
IC208	22D
IC209	22E
IC210	21J
TRANSISTOR	
Q201	17B
Q202	17A
Q203	20O
Q204	21M
Q205	20N
Q206	20N
Q207	21O
Q208	21O
Q209	21N
Q210	21N
Q211	21N
Q213	22F
Q214	22C
Q215	21H
Q216	21G
Q217	19G
Q218	20G
Q219	20F
Q220	16B
Q221	15O
Q222	20C
Q223	20C
Q224	20D
Q225	21D
Q226	21C
Q227	20B
Q228	18O
Q229	21M
Q230	20M
Q231	21M
Q232	19G
Q233	18F
Q234	17G
Q235	19I
Q236	14N
Q237	13O
Q238	14N
Q239	17O
Q240	17A
Q241	17G
Q242	17G
Q243	18F
Q244	17C
Q245	21A
Q301	17K
Q302	18M
Q303	17L
Q304	16M
Q305	16M
Q306	16M
Q307	16M
Q308	17M
Q309	18N
Q310	17M
Q311	16M
Q312	18K
Q313	19L
Q314	19L
Q315	18L
Q316	19M
Q317	17M
DIODE	
D202	17F
D203	20N
D204	22G
D205	20I
D206	18G
D207	18G
D208	20I
D210	20O
D212	16B
D213	21E

REF No.	LOCATION
DIODE	
D214	16B
D216	21G
D217	21G
D218	15N
D219	15O
D220	16A
D221	17A
D222	17C
D302	18L
RESISTOR	
R202	18B
R203	20B
R206	20N
R207	20N
R208	21M
R209	21M
R210	20N
R211	20N
R212	21N
R213	21N
R214	21M
R215	20N
R216	21F
R217	22G
R218	22F
R219	22F
R220	21E
R221	22E
R222	21C
R223	21I
R224	21G
R225	22G
R225	22G
R226	20H
R227	21N
R228	21N
R229	20N
R230	19C
R231	19G
R232	20G
R233	18H
R234	20G
R235	22N
R236	20B
R237	19C
R238	22C
R240	19C
R241	17C
R242	17B
R243	20C
R244	20C
R245	20C
R246	20C
R247	20D
R249	21D
R250	21D
R251	21C
R252	21B
R253	17G
R254	18F
R255	17C
R256	13N
R257	13N
R258	17F
R260	18G
R261	28G
R262	18G
R263	18G
R264	18F
R265	18G
R266	21M
R267	21M
R268	20L
R269	20M
R270	21M
R271	22M
R272	21M
R273	21L
R275	14N
R276	14N
R277	14O
R278	14O

REF No.	LOCATION
RESISTOR	
R279	13O
R280	14N
R281	17O
R282	17O
R284	21C
R283	16C
R285	18G
R286	17C
R287	18C
R288	18O
R289	18H
R290	18C
R291	17G
R301	16M
R302	16N
R303	16C
R304	17N
R305	17N
R306	17M
R307	17N
R308	17M
R309	17N
R310	17N
R311	17M
R312	18M
R313	17M
R314	15K
R315	15L
R316	17K
R317	15K
R318	16K
R319	16K
R320	16K
R321	17K
R322	17K
R323	18K
R324	19K
R325	19L
R326	19K
R327	19L
R328	19L
R329	18L
R330	18L
R331	18L
R332	18L
R333	19M
R334	18M
R335	17L
R336	19M
R337	19M
R338	17K
R339	17C
R340	16M
R341	16M
R342	16M
CAPACITOR	
C204	18B
C205	19B
C206	20B
C207	19A
C209	19A
C210	18A
C211	18A
C212	18A
C213	18B
C214	17B
C217	20N
C218	21F
C222	21G
C223	22E
C224	22E
C225	22C
C227	20G
C228	19G
C229	19G
C230	19G
C231	19B
C233	16M
C234	18F
C235	20C
C236	20C
C237	20D

REF No.	LOCATION
CONNECTOR	
C238	20D
C239	20D
C240	21C
C241	21C
C242	20C
C243	20C
C244	20B
C246	21C
C247	19C
C254	20C
C258	17F
C259	19C
C260	18G
C261	18G
C262	18G
C263	18F
C264	18F
C265	18F
C266	18F
C267	18G
C269	18G
C271	21K
C272	17F
C273	15J
C301	16L
C302	16N
C303	16M
C304	16N
C305	17M
C306	17M
C307	17N
C308	18N
C310	17M
C311	17M
C312	17L
C313	17L
C314	17L
C315	15K
C316	16K
C317	16K
C319	16K
C320	16K
C321	16K
C322	16K
C323	16K
C324	17K
C326	19K
C327	19L
C328	19L
C329	19M
C331	15L
C332	19M
C333	16L
C334	15L
C335	16M

• SERVO

REF No.	LOCATION
TRANSISTOR	
Q441	11C
DIODE	
D441	11C
RESISTOR	
R401	13I
R402	13I
R403	13I
R404	14I
R405	13I
R406	13I
R407	15I
R408	19D
R409	15I
R410	13G
R411	13G
R412	13G
R413	11F
R414	13G
R415	13G

REF No.	LOCATION
RESISTOR	
R416	13G
R417	14G
R418	14G
R419	14G
R420	13G
R421	14G
R422	14G
R423	14G
R424	14G
R425	14F
R426	14G
R428	14F
R429	14G
R430	15G
R431	15G
R432	11E
R434	15G
R436	15G
R438	15G
R441	10C
R442	10C
R443	11C
R445	13H
R448	14H
R449	10E
R451	12G
R452	12G
R453	13F
R454	12G
R455	12F
R456	13F
R458	14G
CAPACITOR	
C401	13I
C404	13I
C405	14I
C407	15I
C409	14I
C410	15H
C411	13H
C421	15G
C431	15H
C451	12F
C453	13G
C454	12F
C455	13F
C456	12F
C457	12F
C476	11E
C478	11D
C480	16I

• SYSCON

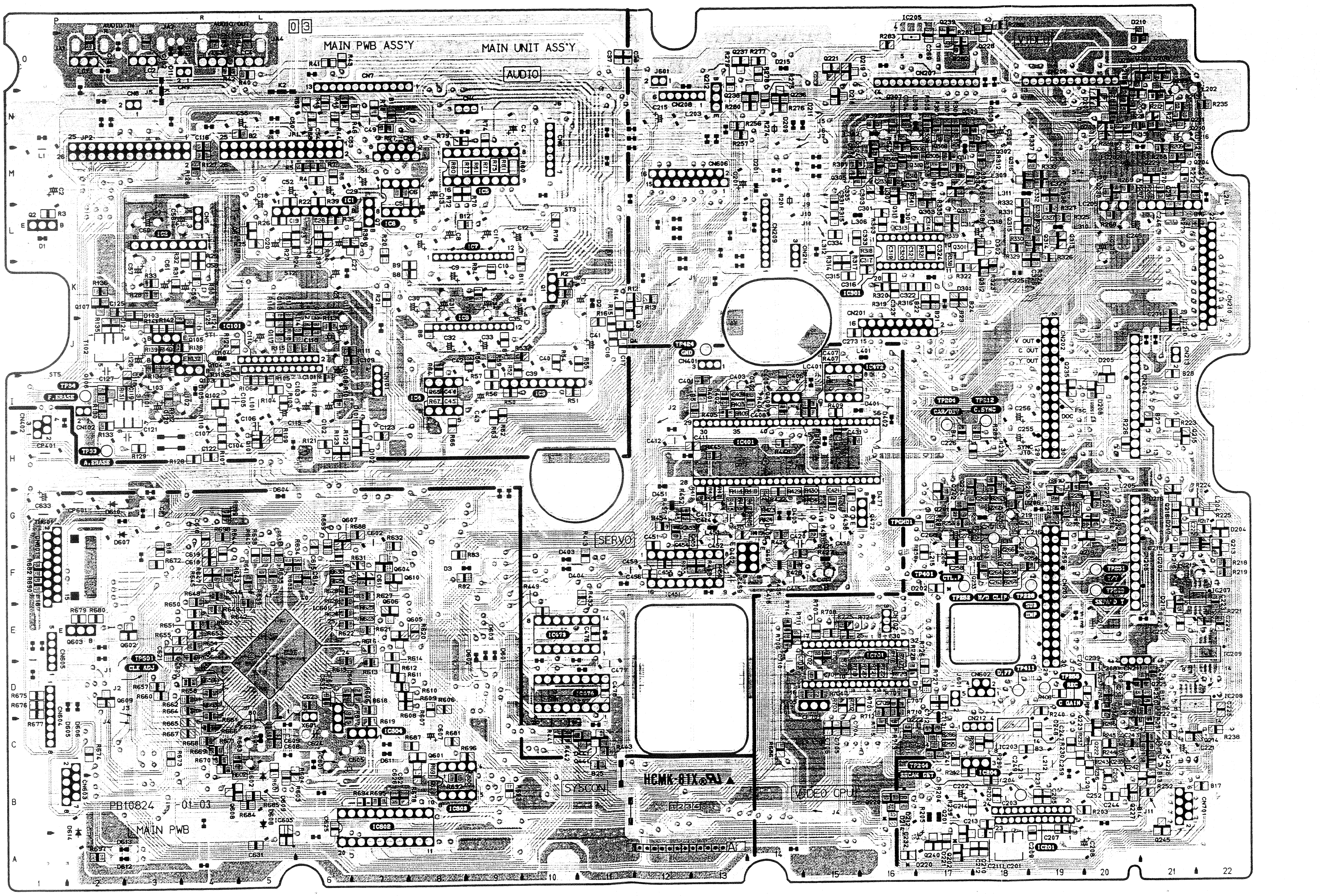
REF No.	LOCATION
IC	
IC601	6E
IC605	5B
TRANSISTOR	
Q601	8C
Q602	3E
Q604	7F
Q605	7E
Q606	7E
Q607	6G
Q608	4B
Q609	2D
Q610	7F
RESISTOR	
R601	5C
R602	6B
R603	5B
R604	5B
R605	7D
R606	8D
R607	8D
R608	7D
R609	7D

REF No.	LOCATION
RESISTOR	
R610	7D
R611	7D
R612	7D
R613	7D
R614	7E
R615	6D
R616	7E
R617	6C
R618	7D
R619	7C
R620	8E
R621	7E
R622	6E
R623	7E
R624	6E
R625	7E
R626	6E
R627	7F
R628	6F
R629	6F
R630	6F
R631	7F
R632	7F
R633	6F
R634	6F
R635	5F
R636	5F
R637	5F
R638	5F
R639	5F
R640	5F
R641	5F
R642	5E
R643	4F
R644	4F
R645	4F
R646	4F
R647	4F
R648	4F
R649	4E
R650	4E
R651	4E
R652	4E
R653	4E
R654	4E
R655	3E
R656	4E
R657	3D
R658	4D
R659	4D
R660	3D
R661	4C
R662	4D
R663	4D
R664	4D
R665	4C
R666	4C
R667	4C
R668	4C
R669	4C
R670	4C
R671	4C
R672	3F
R673	3C
R674	2C
R675	1D
R676	1D
R677	1D
R678	8B
R679	2E
R680	2E
R681	8C
R682	1F
R683	4C
R684	5B
R685	5B
R686	14C
R687	8C
R688	7G
R689	6G
R690	1F
R691	8C
R692	8B

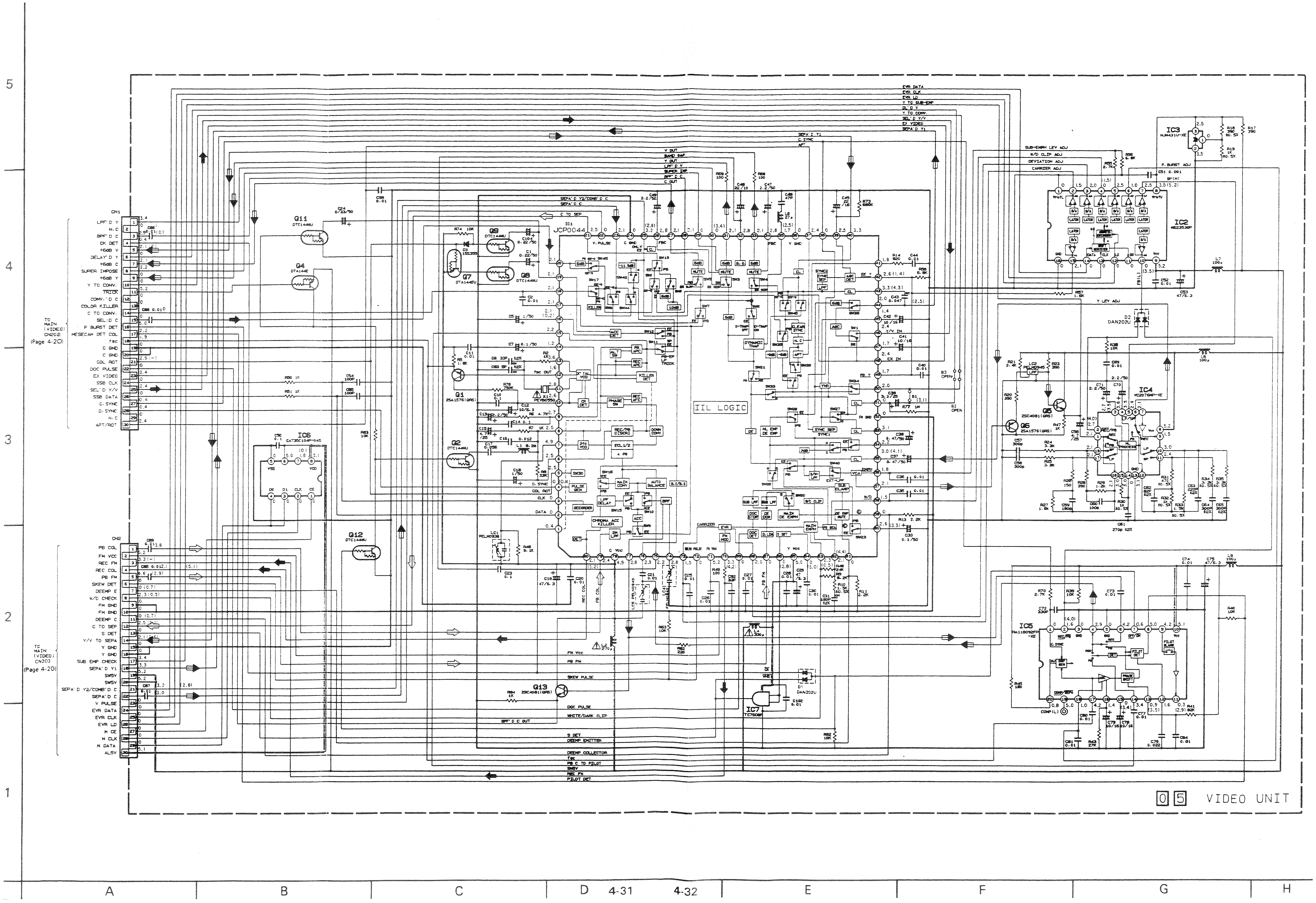
REF No.	LOCATION
CAPACITOR	
R693	9B
R694	7B
R695	7B
R696	9C
R697	2A
R698	4G
R699	4G
C606	6D
C608	5C
C610	7F
C611	7F
C614	6F
C615	6F
C616	4G
C618	4F
C619	4F
C620	3E
C621	3E
C623	6D
C625	6B
C628	8B

• VIDEO CPU

REF No.	LOCATION
RESISTOR	
R701	16D
R702	15D
R703	15D
R704	15D
R705	15D
R706	14E
R707	15E
R708	15E
R709	16D
R710	16C
R711	14E
R712	16C
R713	16C
R714	14E
R715	16C
R716	16D
R717	16D
R718	15D
R719	15D
R720	16D
R721	16D
R722	16D
R723	16D
R724	15E
R725	15E
R726	17D
R727	17D
R728	16D
CAPACITOR	
C701	15D
C702	15D
C703	14D
C704	15C
C705	15C
C706	15C
C707	16D
C708	15D
C709	16D
C711	16C
C712	17D
C713	17D

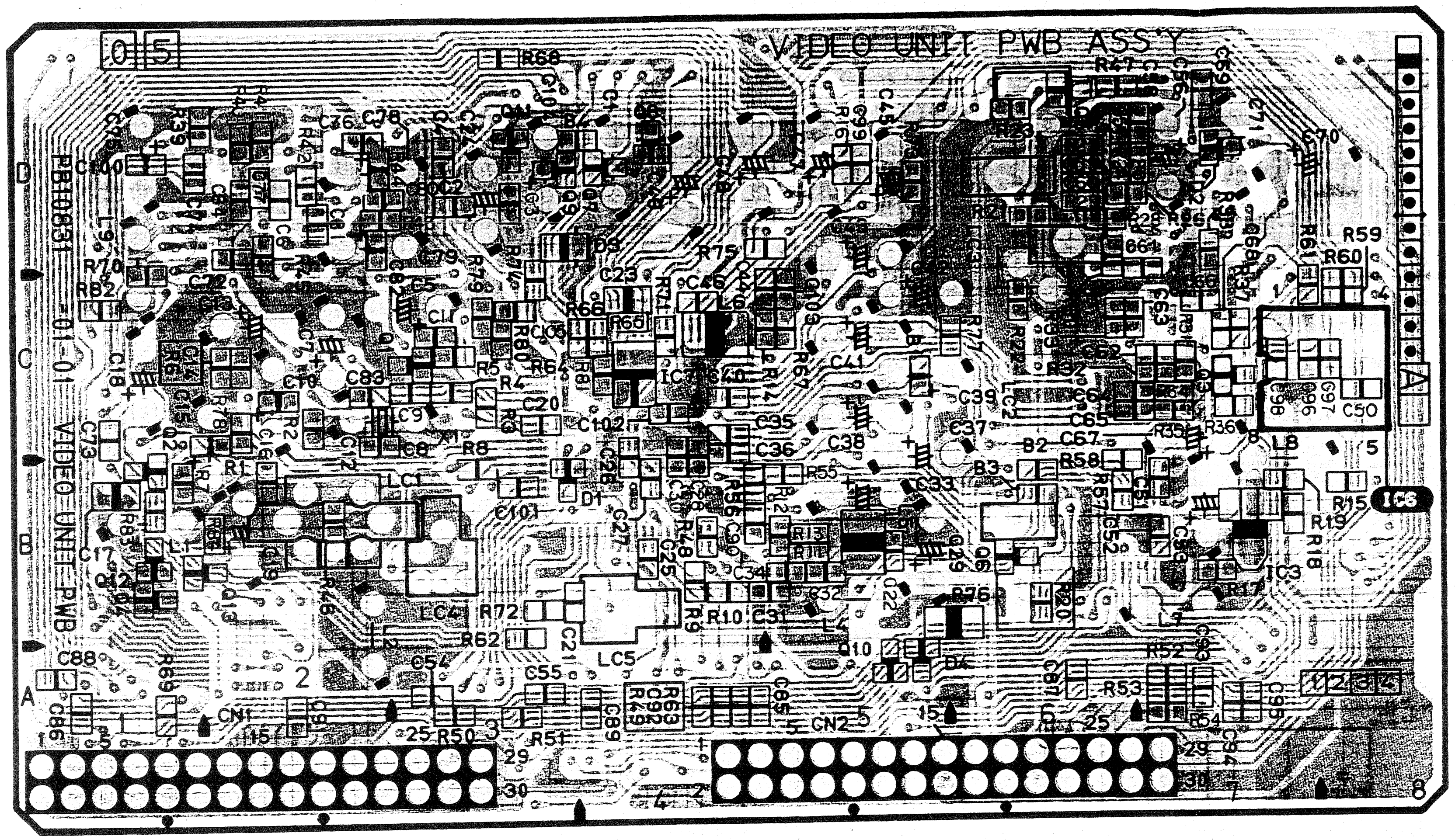

MAIN PWB ASS'Y
MAIN UNIT ASS'Y
AUDIO
SERVO
SYSCON
VIDEO CPU
VIDEO
HCMK-81X
PB10824 01-03
MAIN PWB
03

4.13 VIDEO UNIT SCHEMATIC DIAGRAM

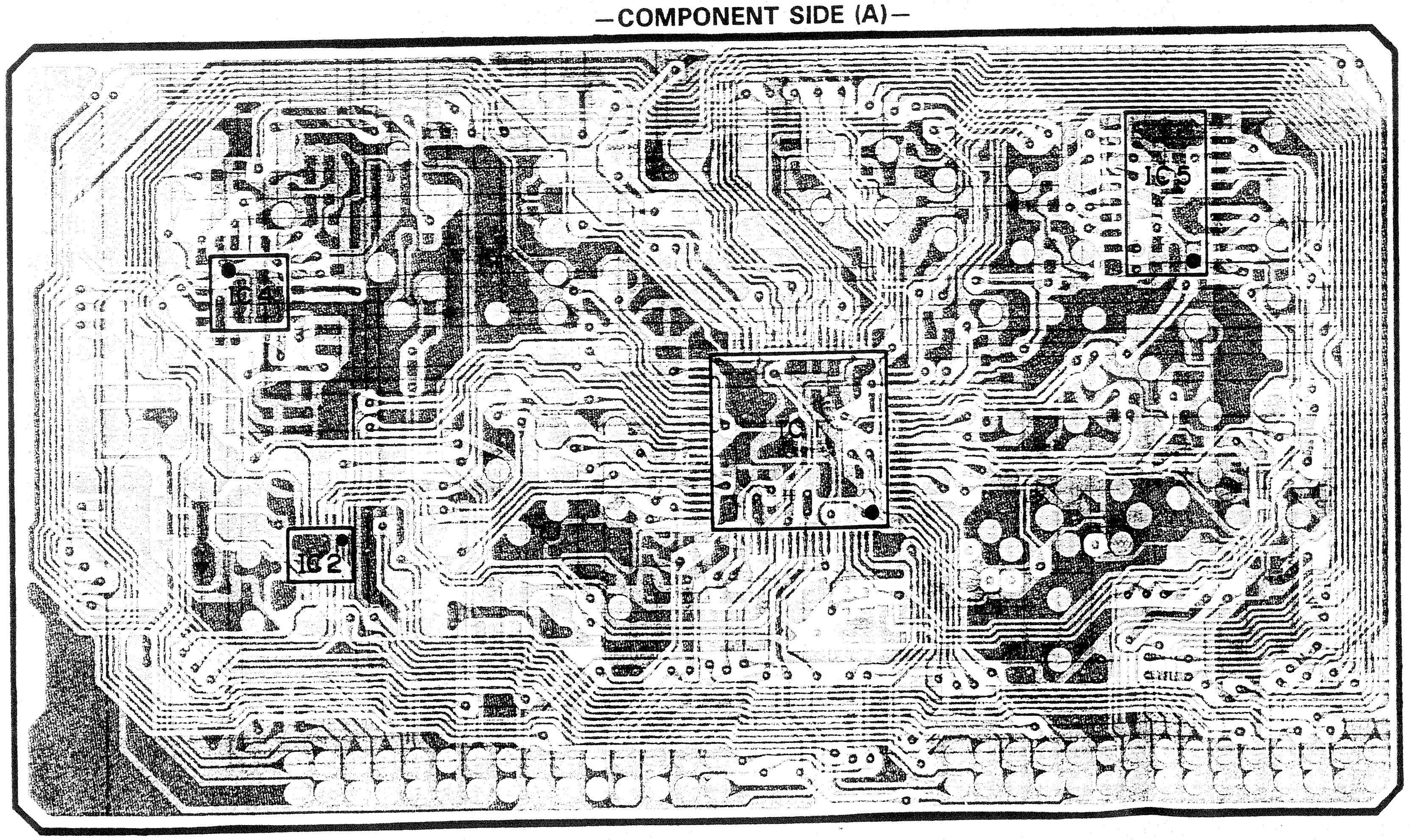

CN1
LPF'D Y
N.C
BPF'D C
CK DET
+6dB V
DELAY'D Y
+6dB C
SUPER IMPOSE
+6dB Y
Y TO CONV.
TRICK
CONV.'D C
COLOR KILLER
C TO CONV.
SEL:D C
P BURST DET
MESECAM DET COL
fsc
C GND
C GND
COL ROT
DOC PULSE
EX VIDEO
SSB CLK
SEL'D Y/V
SSB DATA
C. SYNC
D. SYNC
N.C
APT/ROT
TO MAIN (VIDEO) CN202 (Page 4-20)
CN2
PB COL
FM VCC
REC FM
REC COL
PB FM
SKEW DET
DEEMP E
W/D CHECK
FM GND
FM GND
DEEMP C
C TO SEP
S DET
Y/V TO SEPA
Y GND
Y GND
SUB EMP CHECK
SEPA'D Y1
SW5V
SW5V
SEPA'D Y2/COMB'D C
SEPA'D C
V PULSE
EVR DATA
EVR CLK
EVR LD
M CE
M CLK
M DATA
AL5V
TO MAIN (VIDEO) CN203 (Page 4-20)
IC1 JCP0044
IIL LOGIC
IC2 M62353GP
IC3 NJM431U-XE
IC4 VC2076HP-XE
IC5
IC6 EAT35C104P-045
IC7 TC7S08F
Q1 2SA1576(QRS)
Q2 DTC144WU
Q4 DTA144E
Q5 2SC4081(QRS)
Q6 2SA1576(QRS)
Q7 DTA144EU
Q8 DTC144WU
Q9 DTC144WU
Q11 DTC144WU
Q12 DTC144WU
Q13 2SC4081(QRS)
D1 DAN202U
D2 DAN202U
D3 1SS355
SUB-EMPH LEV ADJ
W/D CLIP ADJ
DEVIATION ADJ
CARRIER ADJ
P. BURST ADJ
Y LEV ADJ
FM Vcc
PB FM
SKEW PULSE
DOC PULSE
WHITE/DARK CLIP
BPF'D C OUT
S DET
DEEMP EMITTER
DEEMP COLLECTOR
fsc
PB C TO PILOT
SW5V
REC FM
PILOT DET
EVR DATA
EVR CLK
EVR LD
Y TO SUB-EMP
DL'D Y
Y TO CONV.
SEL'D Y/V
EX VIDEO
SEPA'D Y1
C SYNC
V OUT
BAND GAP
Y OUT
LPF'D Y
SUPER IMP
BPF'D C
C OUT
SEPA'D Y2/COMB'D C
SEPA'D C
C TO SEP
05 VIDEO UNIT
A
B
C
D
E
F
G
H
1
2
3
4
5

4-14 VIDEO UNIT CIRCUIT BOARD

—FOIL SIDE (B)—



—COMPONENT SIDE (A)—



MAIN COMPONENT PARTS LOCATION GUIDE
<VIDEO UNIT PWB>

REF No.	LOCATION
IC	
IC1	A-4C
IC2	A-7B
IC3	B-7B
IC4	A-7D
IC5	A-2D
IC6	B-8B
IC7	B-4C
TRANSISTOR	
Q1	B-3C
Q2	B-1C
Q4	B-1B
Q5	B-6D
Q6	B-6B
Q7	B-4D
Q8	B-4D
Q9	B-3D
Q11	B-3D
Q12	B-1B
Q13	B-2B
DIODE	
D1	B-3B
D2	B-7D
D3	B-4D
CONNECTOR	
CN1	B-2A
CN2	B-5A

LEADLESS COMPONENT PARTS LOCATION GUIDE
<VIDEO UNIT PWB>

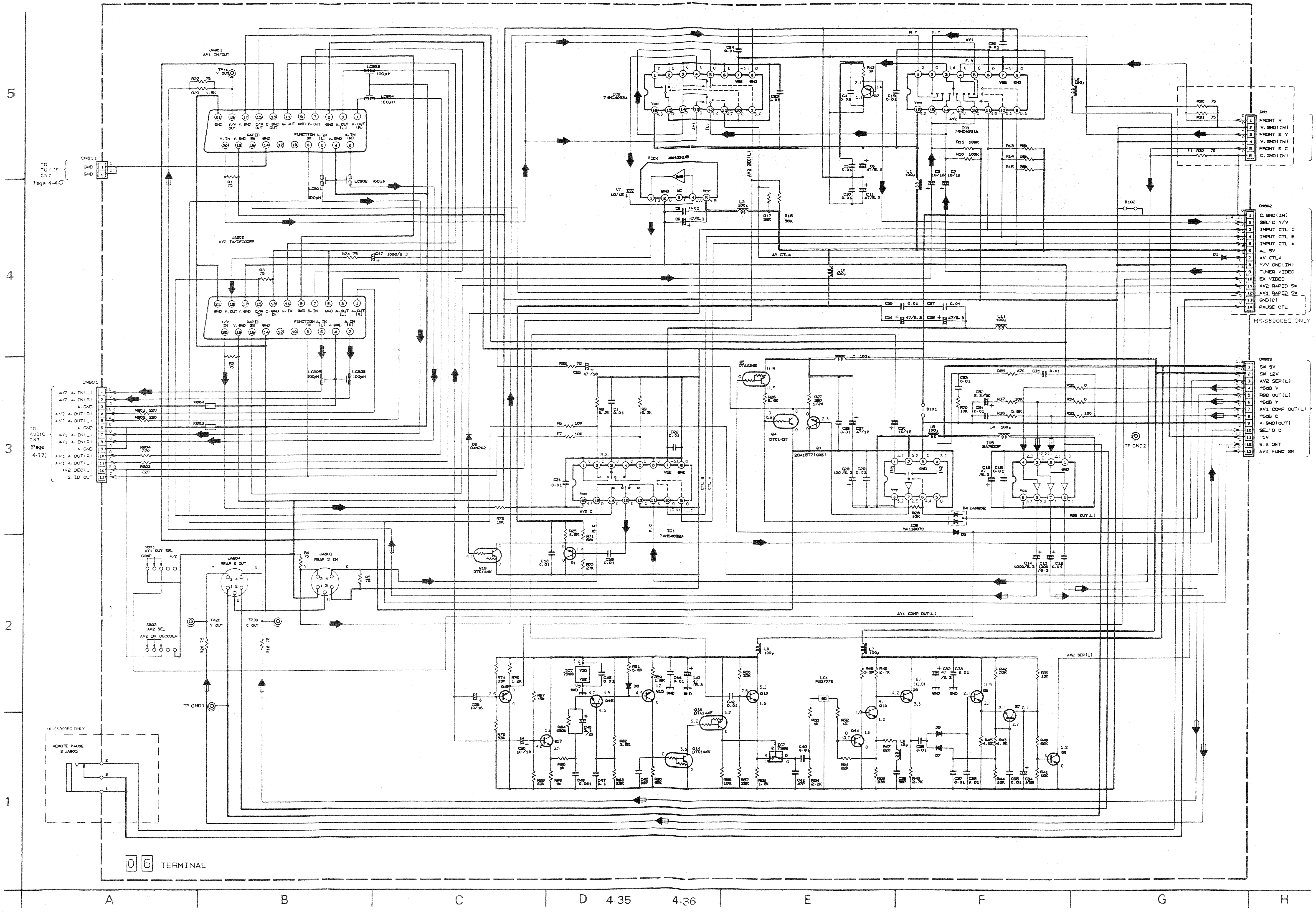
REF No.	LOCATION
IC	
IC1	A-4C
IC2	A-7B
IC3	B-7B
IC4	A-7D
IC5	A-2D
IC6	B-8B
IC7	B-4C
TRANSISTOR	
Q1	B-3C
Q2	B-1C
Q3	B-7C
Q4	B-1B
Q5	B-6D
Q6	B-6B
Q7	B-4D
Q8	B-4D
Q9	B-3D
Q10	B-5A
Q11	B-3D
Q12	B-1B
Q13	B-2B
DIODE	
D1	B-3B
D2	B-7D
D3	B-4D
D4	B-5A
RESISTOR	
R1	B-2C
R2	B-2C
R3	B-3C
R4	B-3C
R5	B-3C
R6	B-2C
R7	B-1B
R8	B-3B
R9	B-4B
R10	B-4B
R11	B-5B
R12	B-5B
R13	B-5B
R14	B-5C
R15	B-8B
R16	B-5D
R17	B-7A
R18	B-7A
R19	B-7A
R20	B-6B
R21	B-6D
R22	B-6C
R23	B-6D
R24	B-6D
R25	B-7D
R26	B-7D
R27	B-6D
R28	B-6D
R29	B-6D
R30	B-6C
R31	B-7C
R32	B-7C
R33	B-6C
R34	B-7C
R35	B-7C
R36	B-7C
R37	B-7C
R38	B-7D
R39	B-1D
R40	B-2D
R41	B-2D
R42	B-2D
R43	B-2D
R44	B-2D
R45	B-2D
R46	B-2B
R47	B-6D
R48	B-4B
R49	B-4A
R50	B-3A
R51	B-3A

REF No.	LOCATION
RESISTOR	
R52	B-7A
R53	B-7A
R54	B-7A
R55	B-5B
R56	B-4B
R57	B-6B
R58	B-6B
R59	B-8C
R60	B-8C
R61	B-7C
R62	B-3B
R63	B-4A
R64	B-4C
R65	B-4C
R66	B-4C
R67	B-5C
R68	B-3D
R69	B-1A
R70	B-1D
R71	B-4C
R72	B-3B
R73	B-5D
R74	B-3C
R75	B-5D
R76	B-6B
R77	B-6C
R78	B-2C
R79	B-3C
R80	B-3C
R81	B-4C
R82	B-1C
R83	B-2A
R84	B-2B
CAPACITOR	
C2	B-3D
C3	B-3D
C4	B-3D
C6	B-2D
C8	B-3C
C9	B-3C
C10	B-2C
C11	B-3C
C14	B-2C
C16	B-2B
C17	B-1B
C20	B-3C
C21	B-3B
C22	B-5B
C23	B-4C
C25	B-4B
C26	B-4B
C27	B-4B
C28	B-4B
C30	B-4B
C31	B-5B
C32	B-5B
C34	B-5B
C35	B-4C
C36	B-4C
C40	B-4C
C44	B-5C
C46	B-4C
C50	B-8C
C51	B-7B
C52	B-7A
C54	B-3A
C55	B-3A
C57	B-6D
C58	B-7D
C59	B-6D
C60	B-6D
C61	B-7C
C62	B-7C
C63	B-7C
C64	B-6C
C65	B-6C
C66	B-7C
C68	B-7C
C69	B-7D
C72	B-2D

REF No.	LOCATION
CAPACITOR	
C73	B-1C
C74	B-1D
C76	B-2D
C77	B-2D
C80	B-2D
C81	B-2D
C82	B-2D
C83	B-2C
C84	B-2D
C85	B-4A
C86	B-1A
C87	B-6A
C88	B-1A
C89	B-4A
C90	B-4B
C91	B-2A
C92	B-4A
C93	B-7A
C94	B-7A
C95	B-7A
C96	B-7C
C97	B-8C
C98	B-7C
C99	B-5D
C100	B-1D
C101	B-3B
C102	B-4C
C103	B-5C
C105	B-3C

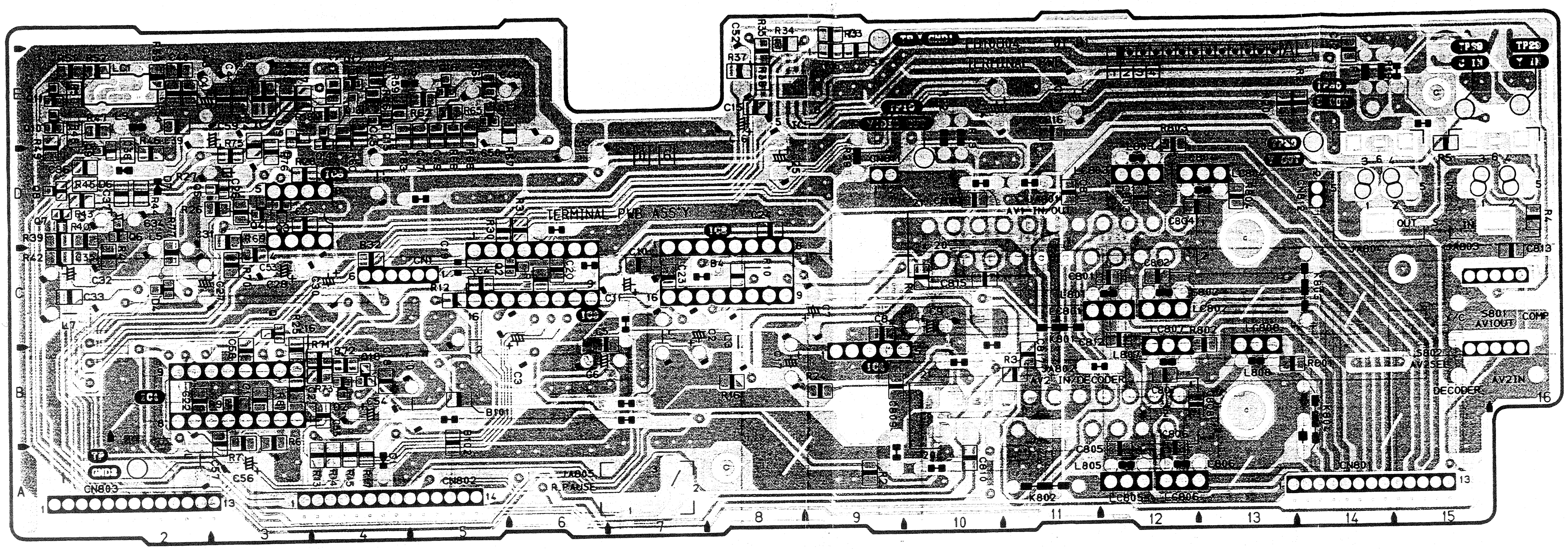
4.15 TERMINAL SCHEMATIC DIAGRAM

NOTES: ALL PNP TYPE TRANSISTORS ARE 2SA1576(QRS).
ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS).



JA801 AV1 IN/OUT
JA802 AV2 IN/DECODER
CN811
TO TU/IF CN7 (Page 4-40)
CN801
AV2 A. IN(L)
AV2 A. IN(R)
A. GND
AV2 A. OUT(R)
AV2 A. OUT(L)
A. GND
AV1 A. IN(L)
AV1 A. IN(R)
A. GND
AV1 A. OUT(R)
AV1 A. OUT(L)
AV2 DEC(L)
S. ID OUT
TO AUDIO CN7 (Page 4-17)
IC2 74HC4053A
IC3 74HC4051A
IC4 HM1031XB
IC1 74HC4052A
IC5 BA7623F
IC6 HA118070
IC7 78M5
LC1 PU57072
CN1
FRONT V
V. GND(IN)
FRONT S Y
V. GND(IN)
FRONT S C
C. GND(IN)
FROM/TO SW/JACK CN104 (Page 4-48)
CN802
C. GND(IN)
SEL'D Y/V
INPUT CTL C
INPUT CTL B
INPUT CTL A
AL 5V
AV CTL4
Y/V GND(IN)
TUNER VIDEO
EX VIDEO
AV2 RAPID SW
AV1 RAPID SW
GND(C)
PAUSE CTL
TO MAIN(VIDEO) CN207 (Page 4-19)
HR-S6900EG ONLY
CN803
SW 5V
SW 12V
AV2 SEP(L)
+6dB V
RGB OUT(L)
+6dB Y
AV1 COMP OUT(L)
+6dB C
V. GND(OUT)
SEL'D C
-5V
W. A DET
AV1 FUNC SW
TO MAIN(VIDEO) CN206 (Page 4-19)
S801 AV1 OUT SEL
S802 AV2 SEL
JA804 REAR S OUT
JA803 REAR S IN
TP GND1
TP GND2
TP20 Y OUT
TP30 C OUT
HR-S6900EG ONLY
REMOTE PAUSE JA805
AV1 COMP OUT(L)
AV2 SEP(L)
RGB OUT(L)
06 TERMINAL
A
B
C
D
E
F
G
H
1
2
3
4
5

4.16 TERMINAL CIRCUIT BOARD


TERMINAL PWB ASS'Y
AV1 IN/OUT
AV2 IN/DECODER
S801 AV1OUT
S802 AV2SEL
COMP
AV2IN
DECODER
OUT
IN
R.PAUSE
CN801
CN802
CN803
IC1
IC2
IC3
IC4
IC5
IC6
IC7
TP30
TP20
GND1
GND2
A
B
C
D
E
1
2
3
4
5
6
7
8
9
10
11
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16

MAIN COMPONENT PARTS LOCATION GUIDE
<TERMINAL PWB>

REF No.	LOCATION
IC	
IC1	2B
IC2	8D
IC3	6C
IC4	9B
IC5	8E
IC6	4D
IC7	3E
TRANSISTOR	
Q1	3C
Q2	6C
Q3	3D
Q4	3D
Q5	3D
Q6	2D
Q7	1D
Q8	1D
Q9	1D
Q10	1E
Q11	1E
Q12	4E
Q13	4E
Q14	4E
Q15	4E
Q16	5E
Q17	5E
Q18	4B
Q19	3E

REF No.	LOCATION
DIODE	
D1	4A
D2	4B
D4	2C
D6	2D
D7	2D
D8	5E
CONNECTOR	
CN1	5C
CN801	4A
CN802	5A
CN803	2A
CN811	9D
TEST POINT	
TP10	10D
TP20	14D
TP30	14E
GND1	9E
GND2	2A

LEADLESS COMPONENT PARTS LOCATION GUIDE
<TERMINAL PWB>

REF No.	LOCATION
IC	
IC5	8E
TRANSISTOR	
Q1	3C
Q2	6C
Q3	3D
Q4	3D
Q5	3D
Q6	2D
Q7	1D
Q8	1D
Q9	1D
Q10	1E
Q11	1E
Q12	1E
Q13	1E
Q14	1E
Q15	1E
Q16	5E
Q17	5E
Q18	4B
Q19	3E
DIODE	
D2	4B
D4	2C

REF No.	LOCATION
RESISTOR	
R1	10C
R2	9A
R3	11B
R4	16D
R5	15D
R6	3A
R7	3A
R8	3B
R9	3B
R10	8B
R11	6C
R12	5C
R13	4A
R14	4A
R15	4A
R16	8B
R17	4A
R20	13E
R22	14E
R24	9B
R25	3B
R26	3D
R28	3D
R30	5D
R31	6D
R32	4C
R33	9E
R34	8E

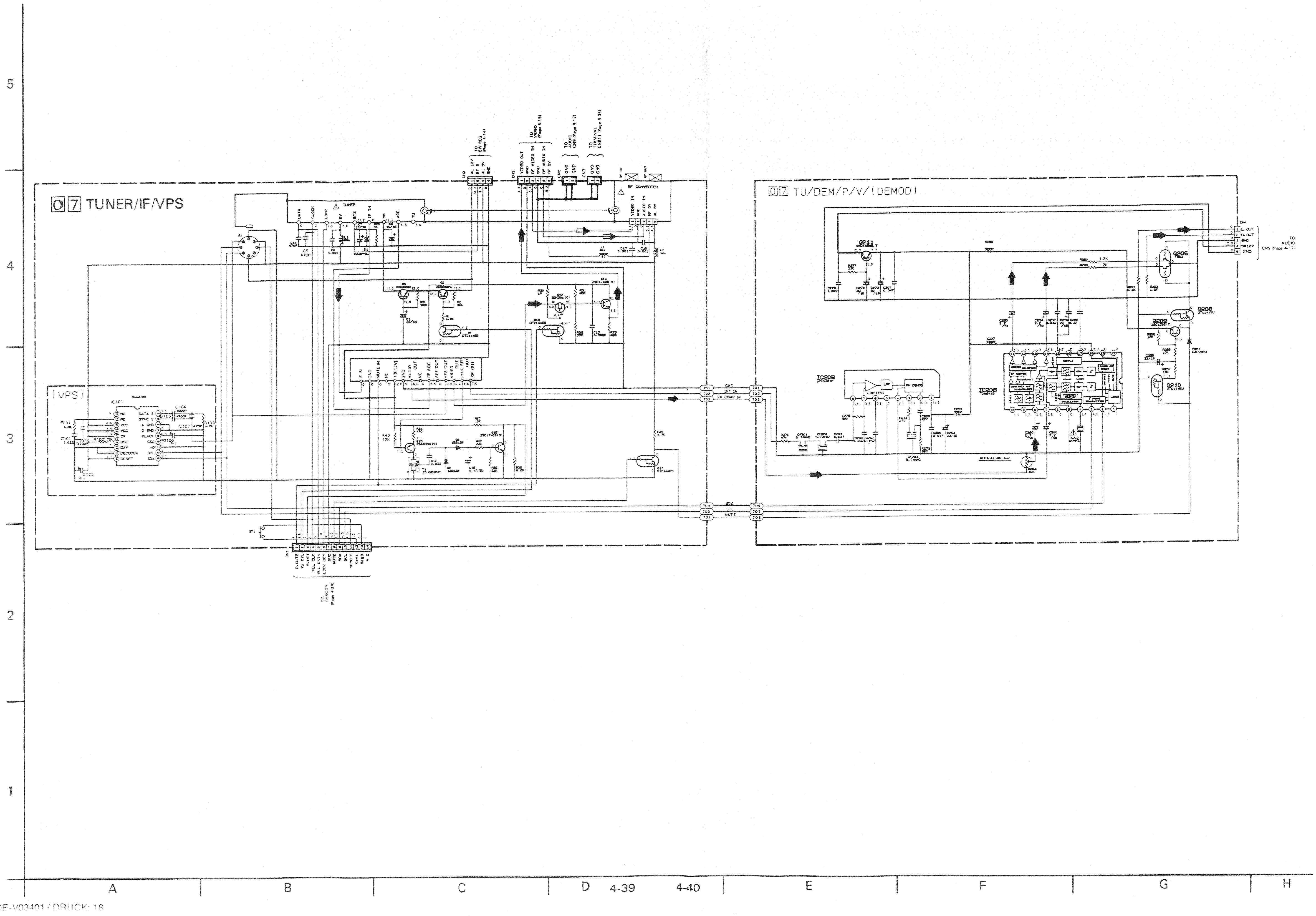
REF No.	LOCATION
RESISTOR	
R35	8E
R36	9E
R37	8E
R38	3E
R39	1D
R40	1D
R41	2C
R42	1D
R43	1D
R44	2D
R45	1D
R46	2E
R47	1E
R48	1E
R49	1D
R50	1E
R51	1E
R52	1E
R53	2E
R54	2E
R55	3E
R56	4E
R57	3E
R58	4E
R59	4E
R60	4E
R61	4E
R62	5E

REF No.	LOCATION
RESISTOR	
R63	4D
R64	5E
R65	5E
R66	5E
R67	6E
R68	5E
R69	3D
R70	3C
R71	4B
R72	4B
R73	4B
R74	3D
R75	3D
R76	3D
R77	2D
R801	14B
R802	13B
R803	12D
R804	13D
CAPACITOR	
C1	3B
C4	5C
C5	6C
C8	9C
C10	7C
C12	14E
C15	8E

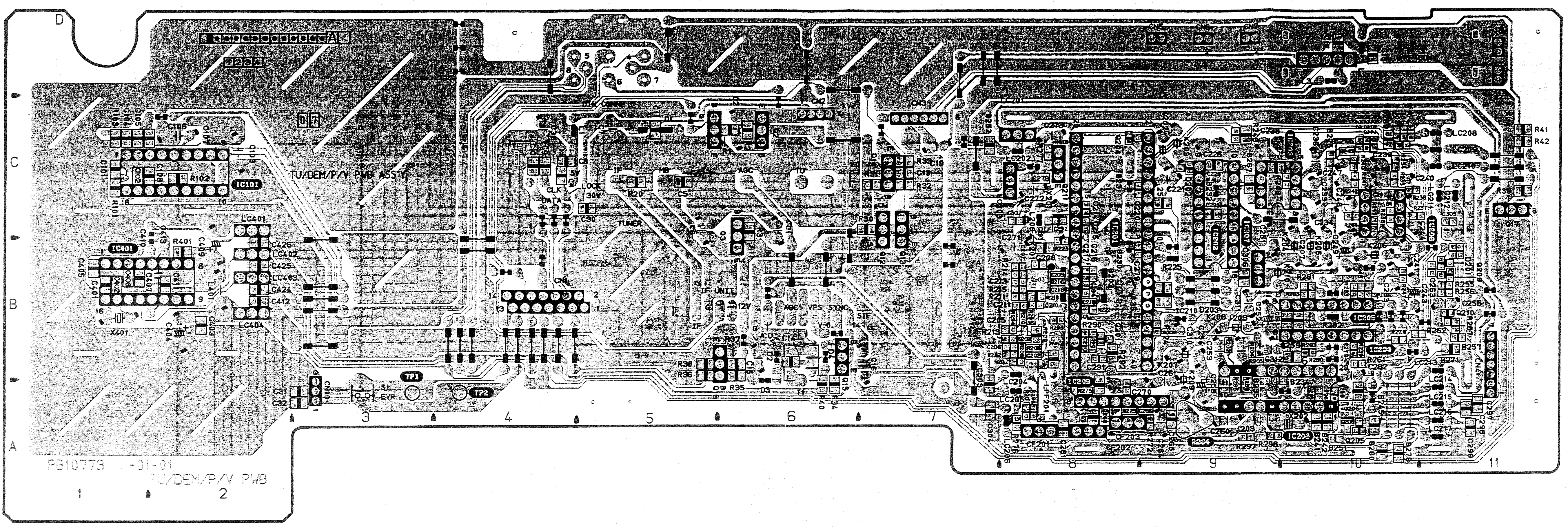
REF No.	LOCATION
RESISTOR	
C18	4B
C20	6C
C21	3B
C22	2B
C23	7C
C24	8D
C26	3D
C29	3D
C31	3D
C33	1C
C35	1C
C36	1D
C37	2D
C38	2D
C39	2E
C40	2E
C41	2E
C42	4E
C44	3E
C45	4E
C46	3E
C47	5E
C49	5E
C51	9E
C53	3C
C55	4B
C57	3A
C58	3B

REF No.	LOCATION
RESISTOR	
C801	12C
C802	12C
C803	12D
C804	12D
C805	12A
C806	12A
C807	12B
C808	12B
C809	9B
C810	10A
C811	11D
C812	12B
C813	16C
C814	10D
C815	10C
C816	11E
C817	11B

4.17 TUNER/IF/VPS AND DEMODULATOR SCHEMATIC DIAGRAMS


07 TUNER/IF/VPS
07 TU/DEM/P/V/(DEMOD)
(VPS)
IC101
SAA4700
TUNER
DATA
CLOCK
LOCK
5V
BT2
IF IN
MB
ABC
TU
RF CONVERTER
VIDEO IN
GND
AUDIO IN
RF 5V
AL 5V
RF IN
RF OUT
CN2
AL 12V
BT 2
AL 5V
GND
TO SW REG (Page 4-14)
CN3
VIDEO OUT
GND
RF VIDEO IN
GND
RF AUDIO IN
RF 5V
TO VIDEO (Page 4-19)
CN8
TO AUDIO CN9 (Page 4-17)
CN7
TO TERMINAL CN811 (Page 4-35)
J1
Q3 2SC3068
Q2 2SB1184
Q1 DTC114ES
Q12 2SK381(C)
Q13 DTC144ES
Q14 2SC1740S(S)
Q15 2SA933S(S)
Q16 2SC1740S(S)
Q17 DTC144ES
IF IN
GND
MUTE IN
NC
+B(12V)
GND
AUDIO OUT
NC
RF AGC
AFT OUT
VPS OUT
VIDEO OUT
SYNC SEP OUT
SIF OUT
NC
PD
VCC
VCC
CP
OSC
DAV
DECODER
RESET
DATA S
SYNC S
A GND
D GND
BLACK
CSO
AD
SCL
SDA
R101 8.2K
C101 0.022
C102 4700P
R102 75K
C103 0.1
C104 1000P
C105 4700P
C106 0.1
C107 470P
R103 4.7K
R40 12K
T1 15.625KHz
ST1
CN1
P.MUTE
TU CTL
S.DET
PLL CLK
PLL DATA
LOCK DET
GND
MUTE
SDA
SCL
REMOTE
Key1
Sag9
N.C
TO SYSCON (Page 4-24)
701 GND
702 INT IN
703 FM COMP IN
704 SDA
705 SCL
706 MUTE
Q211 2SD1450S.T
IC209 AN7138H
LIMITTER
LPF
FM DEMOD
IC208 TDA8415
SUPPLY
SOURCE SELECTOR
AF SWITCH
control
DEMATRIX AND DE-EMPHASIS
FREQUENCY COUNTER
OSCILLATOR
POWER ON RESET
I²C-BUS TRANSCEIVER
LOGIC
Q206
Q208 DTA144TU
Q209 2SC1332(C)
Q210 DTA114EU
D201 DAP202U
CF201 5.74MHZ
CF202 5.74MHZ
CF203 5.74MHZ
X202 10MHZ
SEPALATION ADJ
R264 10K
CN4
L. OUT
R. OUT
GND
SW12V
GND
TO AUDIO CN9 (Page 4-17)
5
4
3
2
1
A
B
C
D
E
F
G
H

4.18 TUNER CIRCUIT BOARD



MAIN COMPONENT PARTS LOCATION GUIDE
<TUNER PWB>

REF No.	LOCATION
IC	
IC101	2C
IC208	10A
IC209	8A
TRANSISTOR	
Q1	5C
Q2	6C
Q3	6C
Q12	7B
Q13	7B
Q14	7C
Q15	6B
Q16	6A
Q17	11C
Q206	10A
Q208	10A
Q209	11B
Q210	11B
Q211	8C
DIODE	
D1	5C
D2	6B
D3	6A
D4	6B
D201	11B

REF No.	LOCATION
CONNECTOR	
CN1	4B
CN2	6C
CN3	7C
CN4	11B
CN6	9D
CN7	9D
ADJUSTMENT	
R264	9A

LEADLESS COMPONENT PARTS LOCATION GUIDE
<TUNER PWB>

REF No.	LOCATION
IC	
IC210	9C
TRANSISTOR	
Q201	8B
Q202	8B
Q203	8B
Q204	8C
Q205	10A
Q206	10A
Q208	10A
Q209	11B
Q210	11B
DIODE	
D201	11B
D202	9C
RESISTOR	
R1	6C
R2	6C
R3	6C
R20	5C
R30	7C
R31	7C
R32	7C
R33	7C
R34	6A
R35	6A

REF No.	LOCATION
RESISTOR	
R36	5B
R37	6B
R38	5B
R39	11C
R40	6A
R41	11C
R42	11C
R101	1C
R102	2C
R103	1C
R201	8A
R202	9B
R204	9B
R205	9B
R206	8B
R207	8B
R209	8B
R210	8B
R211	8B
R212	8B
R213	8B
R214	8B
R215	8B
R216	8B
R218	8B
R222	8B
R223	8B
R224	9B
R231	10C
R232	10C
R233	10C
R234	10C

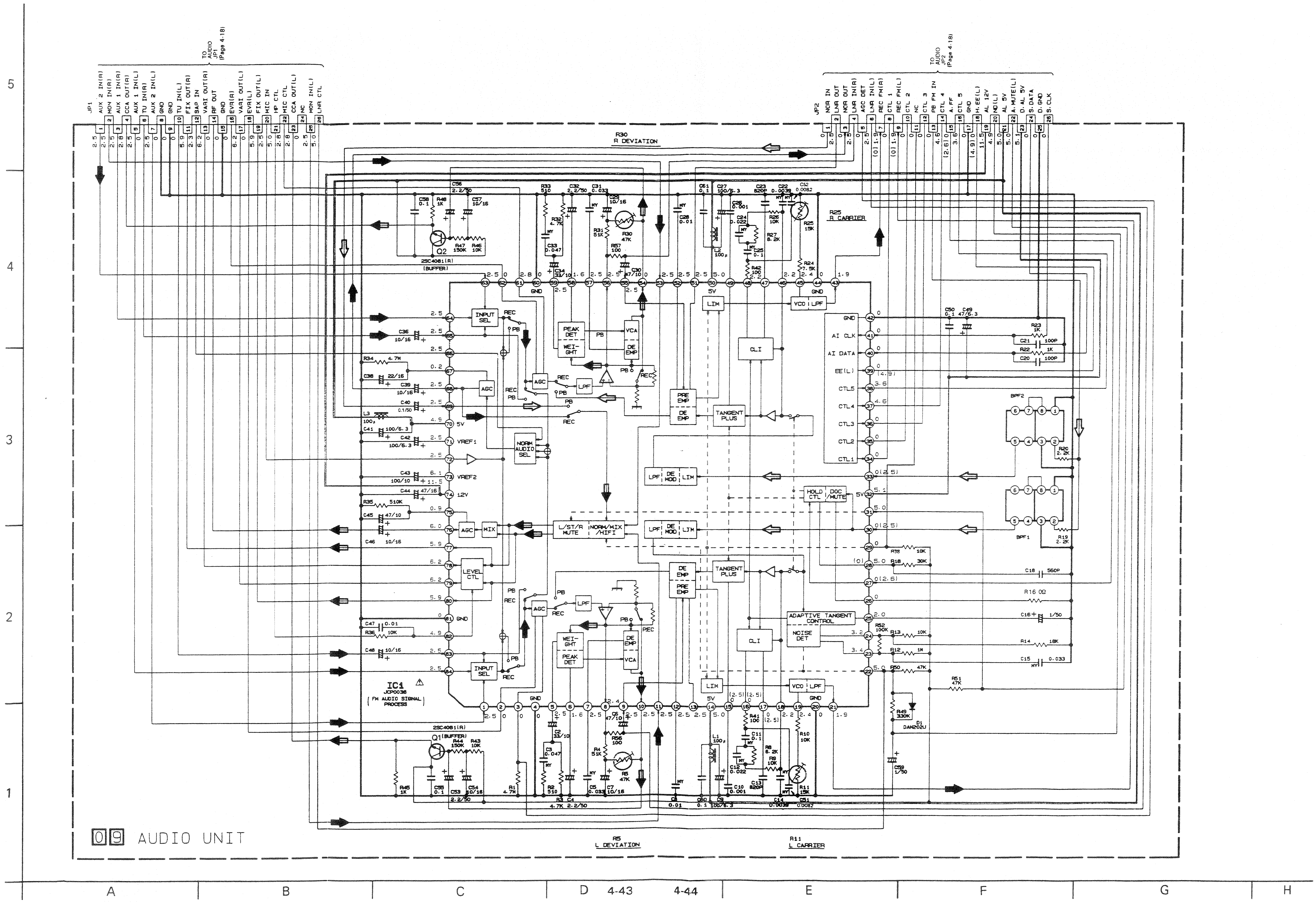
REF No.	LOCATION
RESISTOR	
R235	10C
R236	10C
R237	10C
R238	10C
R240	10C
R241	10C
R242	10C
R243	10C
R244	10C
R245	10C
R246	10B
R247	10B
R248	9C
R249	9C
R255	11B
R256	11B
R257	11B
R259	10A
R260	10B
R261	10B
R262	11B
R263	10B
R265	8A
R272	9A
R273	8A
R275	8A
R276	8A
R277	8C
R278	10B
R280	10B
R281	10B
R283	10B

REF No.	LOCATION
RESISTOR	
R285	9A
R286	9A
R290	8B
R291	8B
R292	8B
R293	8B
R294	8B
R295	8B
R296	8A
R297	9A
R298	9A
R401	2B
CAPACITOR	
C4	4C
C5	5C
C8	4C
C9	4C
C10	4C
C11	5C
C13	7C
C14	6B
C17	10D
C18	10D
C30	5C
C31	2A
C32	2A
C101	1C
C102	1C
C104	1C
C105	1C

REF No.	LOCATION
CAPACITOR	
C107	1C
C205	8B
C206	8B
C207	8B
C208	8B
C209	8B
C214	8C
C215	8C
C216	8B
C217	8B
C218	8B
C219	8B
C220	8C
C225	9C
C228	9C
C242	10C
C245	10B
C257	9A
C259	10B
C263	11B
C265	9A
C266	9A
C267	8A
C268	8A
C269	8A
C278	8C
C279	8C
C281	8A
C290	8B
C291	8B
C292	8C
C293	8C

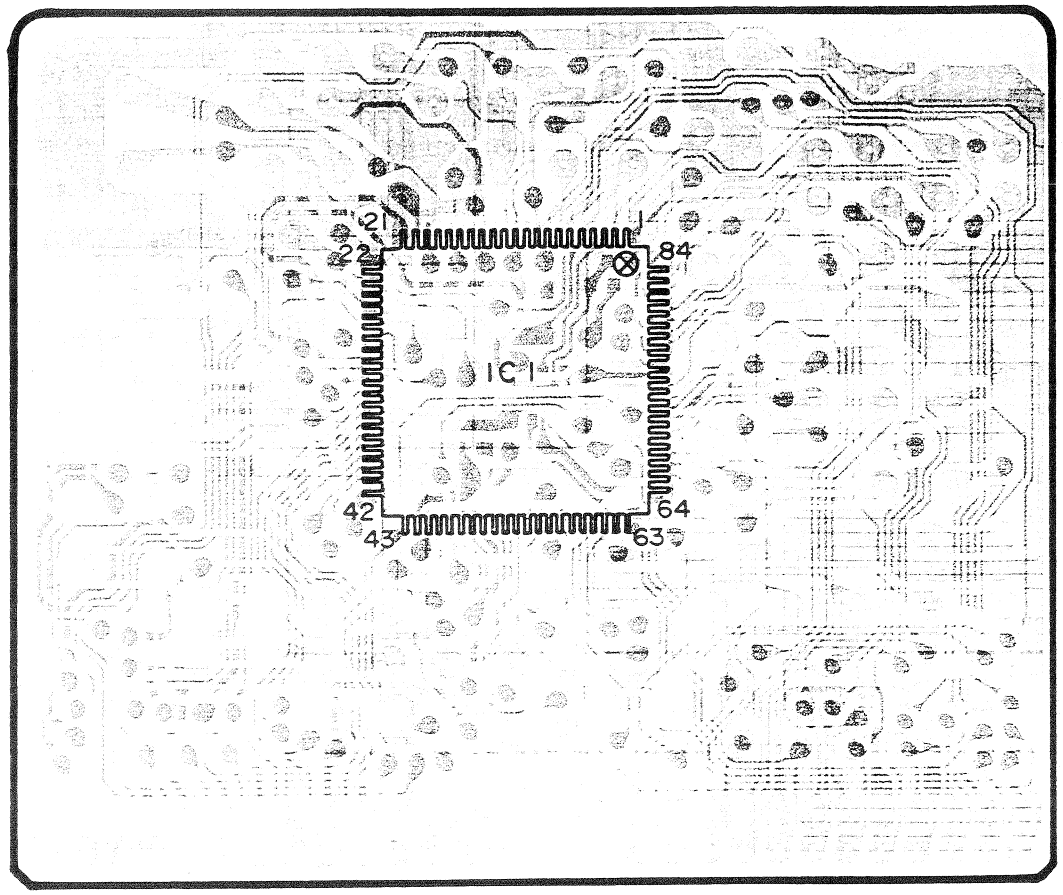
REF No.	LOCATION
CAPACITOR	
C294	8B
C295	10A
C296	10A
C297	11A
C298	11A
C299	11A
C300	10C
C301	10C
C302	10C
C303	7A
C304	7A
C305	11C
C306	9B
C401	1B
C402	1B
C403	2B
C405	1B
C406	1B
C407	1B
C411	2B
C412	2B
C424	2B
C425	2B
C426	2B

4.19 AUDIO UNIT SCHEMATIC DIAGRAM

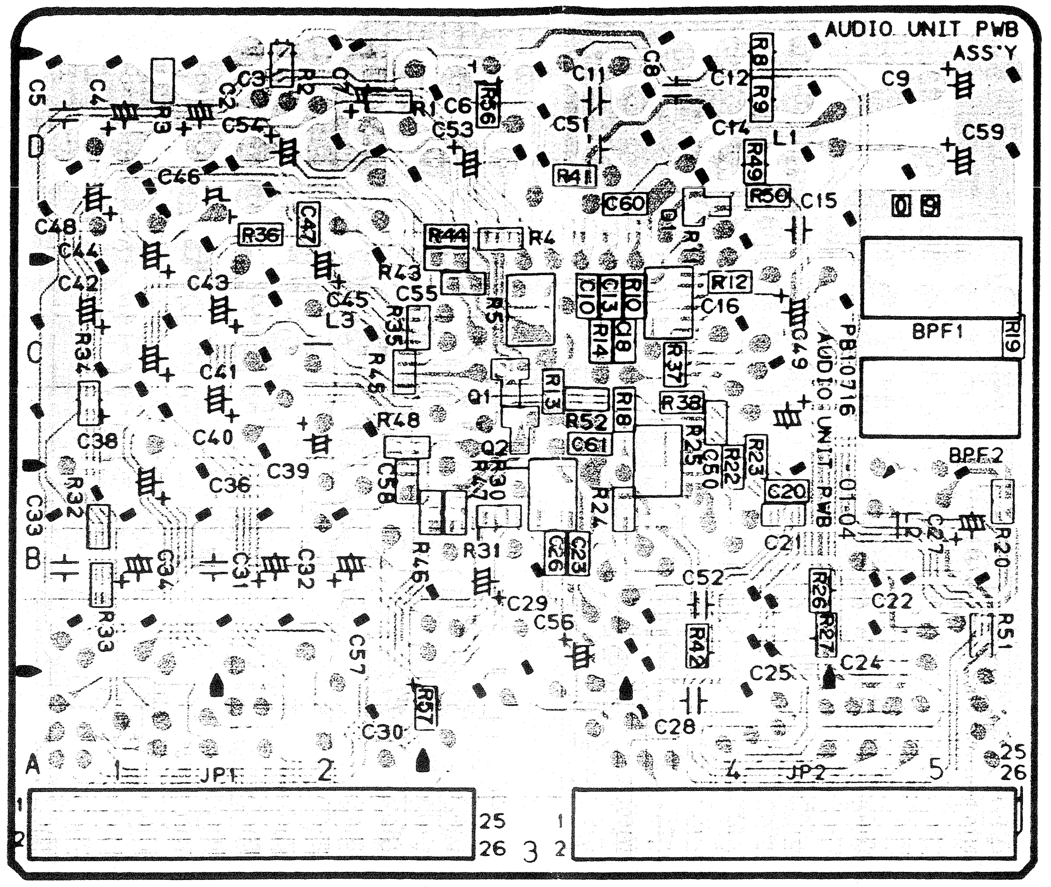

TO AUDIO JP1 (Page 4-18)
JP1
1 AUX 2 IN(R) 2.5
2 MON IN(R) 2.5
3 AUX 1 IN(R) 2.5
4 CCA OUT(R) 2.8
5 AUX 1 IN(L) 2.5
6 TU IN(R) 0
7 AUX 2 IN(L) 2.5
8 GND 0
9 GND 0
10 TU IN(L) 0
11 FIX OUT(R) 5.9
12 SAP IN 2.3
13 VARI OUT(R) 6.2
14 RF OUT 0
15 GND 0
16 EVR(R) 0
17 VARI OUT(L) 6.2
18 EVR(L) 0
19 FIX OUT(L) 5.9
20 MIC IN 2.5
21 HP CTL 5.0
22 MIC CTL 2.8
23 CCA OUT(L) 2.8
24 NC 0
25 MON IN(L) 2.5
26 LNR CTL 5.0
TO AUDIO JP2 (Page 4-18)
JP2
1 NOR IN 0
2 LNR OUT 2.5
3 NOR OUT 0
4 LNR IN(R) 2.5
5 AGC DET 0
6 LNR IN(L) 2.5
7 REC FM(R) (0) 1.9
8 CTL 1 0
9 REC FM(L) (0) 1.9
10 CTL 2 0
11 NC 0
12 CTL 3 0
13 PB FM IN 0
14 CTL 4 4.6
15 A.FF (2.6) 0
16 CTL 5 3.6
17 GND 0
18 H.EE(L) (4.9) 0
19 AL 12V 11.5
20 NO(L) 4.9
21 AL 5V 5.0
22 A.MUTE(L) 5.0
23 D.AL 5V 5.1
24 S.DATA 0
25 D.GND 0
26 S.CLK 0
R30 R DEVIATION
R25 R CARRIER
R5 L DEVIATION
R11 L CARRIER
C56 2.2/50
C58 0.1
R48 1K
C57 10/16
R47 150K
R46 10K
Q2
2SC4081(R) (BUFFER)
R33 510
C32 2.2/50
C31 0.033
C29 10/16
R32 4.7K
C33 0.047
R31 51K
R30 47K
R57 100
C34 33/10
C30 47/10
C28 0.01
C51 0.1
C27 100/6.3
C26 0.001
C24 0.022
L2 100μ
C23 820P
C22 0.0039
C52 0.0082
R26 10K
R27 8.2K
C25 0.1
R42 100
R25 15K
R24 7.5K
INPUT SEL
REC
PB
AGC
LPF
PEAK DET
WEI-GHT
VCA
DE EMP
PRE EMP
TANGENT PLUS
LIM
CLI
VCO
GND
5V
AI CLK
AI DATA
EE(L)
CTL5
CTL4
CTL3
CTL2
CTL1
C50 0.1
C49 47/6.3
R23 1K
C21 100P
R22 1K
C20 100P
BPF2
R20 2.2K
BPF1
R19 2.2K
R34 4.7M
C36 10/16
C38 22/16
C39 10/16
C40 0.1/50
L3 100μ
C41 100/6.3
C42 100/6.3
VREF1
NORM AUDIO SEL
C43 100/10
VREF2
C44 47/16
12V
R35 510K
C45 47/10
C46 10/16
MIX
L/ST/R MUTE
NORM/MIX /HIFI
DE MOD
HOLD CTL
DOC /MUTE
R38 10K
R18 30K
C18 560P
R16 0Ω
LEVEL CTL
ADAPTIVE TANGENT CONTROL
NOISE DET
R52 100K
R13 10K
R12 1M
R14 18K
C16 1/50
C15 0.033
R50 47K
R51 47K
R49 330K
D1 DAN202U
C59 1/50
C47 0.01
R36 10K
C48 10/16
IC1
JCP0036
(FM AUDIO SIGNAL PROCESS)
2SC4081(R)
Q1 (BUFFER)
R44 150K
R43 10K
R45 1K
C55 0.1
C53 2.2/50
C54 10/16
R1 4.7K
C2 33/10
C3 0.047
R2 510
R3 4.7K
C4 2.2/50
C5 0.033
C7 10/16
R4 51K
R56 100
R5 47K
C6 47/10
C8 0.01
C60 0.1
C9 100/6.3
L1 100μ
C10 0.001
C12 0.022
C11 0.1
R41 100
R8 8.2K
R9 10K
R10 10K
C13 820P
C14 0.0039
C51 0.0082
R11 15K
MY
09 AUDIO UNIT
A
B
C
D
E
F
G
H
1
2
3
4
5

4.20 AUDIO UNIT CIRCUIT BOARD

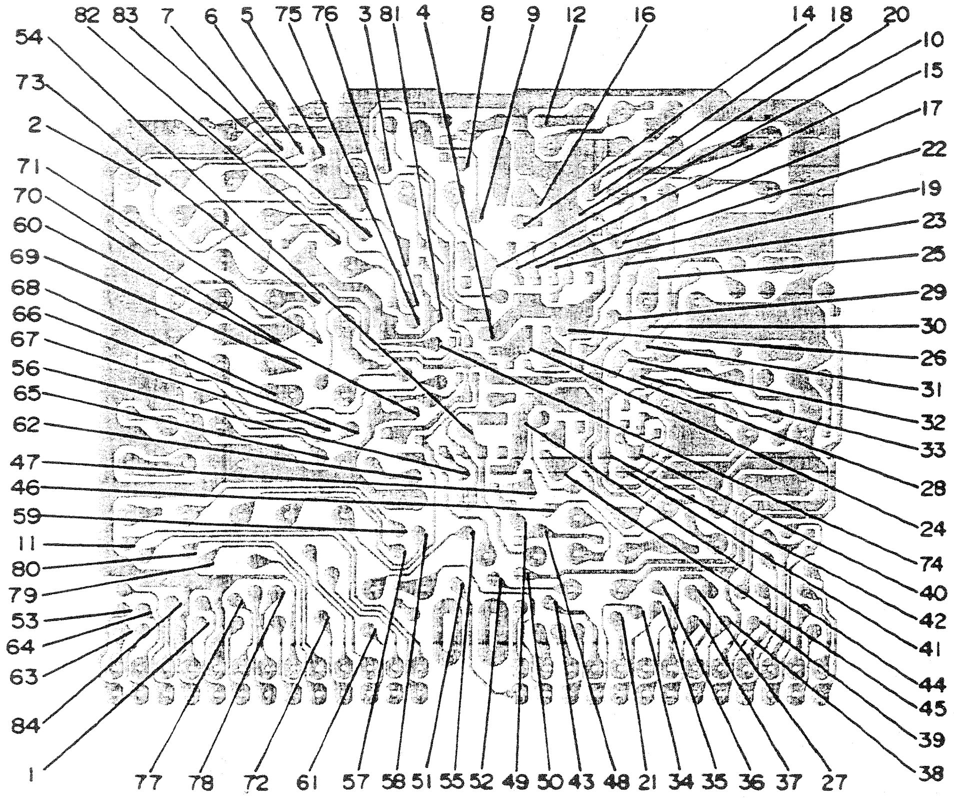
— COMPONENT SIDE —
(A)


21
22
84
IC1
42
43
64
63

— FOIL SIDE —
(B)


AUDIO UNIT PWB ASS'Y
PB10716 AUDIO UNIT PWB 01-04
BPF1
BPF2
JP1
JP2
A
B
C
D
1
2
3
4
5
25
26

— IC PIN NUMBER LOCATION (FOIL SIDE) —


82 83 7 6 5 75 76 3 81 4 8 9 12 16 14 18 20
54 73 2 71 70 60 69 68 66 67 56 65 62 47 46 59 11 80 79 53 64 63 84 1
10 15 17 22 19 23 25 29 30 26 31 32 33 28 24 74 40 42 41 44 45 39 38
77 78 72 61 57 58 51 55 52 49 50 43 48 21 34 35 36 37 27

LEADLESS COMPONENT PARTS LOCATION GUIDE
<AUDIO UNIT BOARD>

REF. No.	LOCATION
TRANSISTOR	
Q1	B-3C
Q2	B-3C

REF. No.	LOCATION
DIODE	
D1	B-4D

REF. No.	LOCATION
RESISTOR	
R1	B-2D
R2	B-2D
R3	B-1D
R4	B-3D
R5	B-3C
R8	B-4D
R9	B-4D
R10	B-4C
R11	B-4C
R12	B-4C
R13	B-3C
R14	B-3C
R18	B-3C
R19	B-5C
R20	B-5B

REF. No.	LOCATION
RESISTOR	
R22	B-4B
R23	B-4B
R24	B-3B
R25	B-4C
R26	B-4B
R27	B-4B
R30	B-3B
R31	B-3B
R32	B-1B
R33	B-1B
R34	B-1C
R35	B-2C
R36	B-2D
R37	B-4C
R38	B-4C

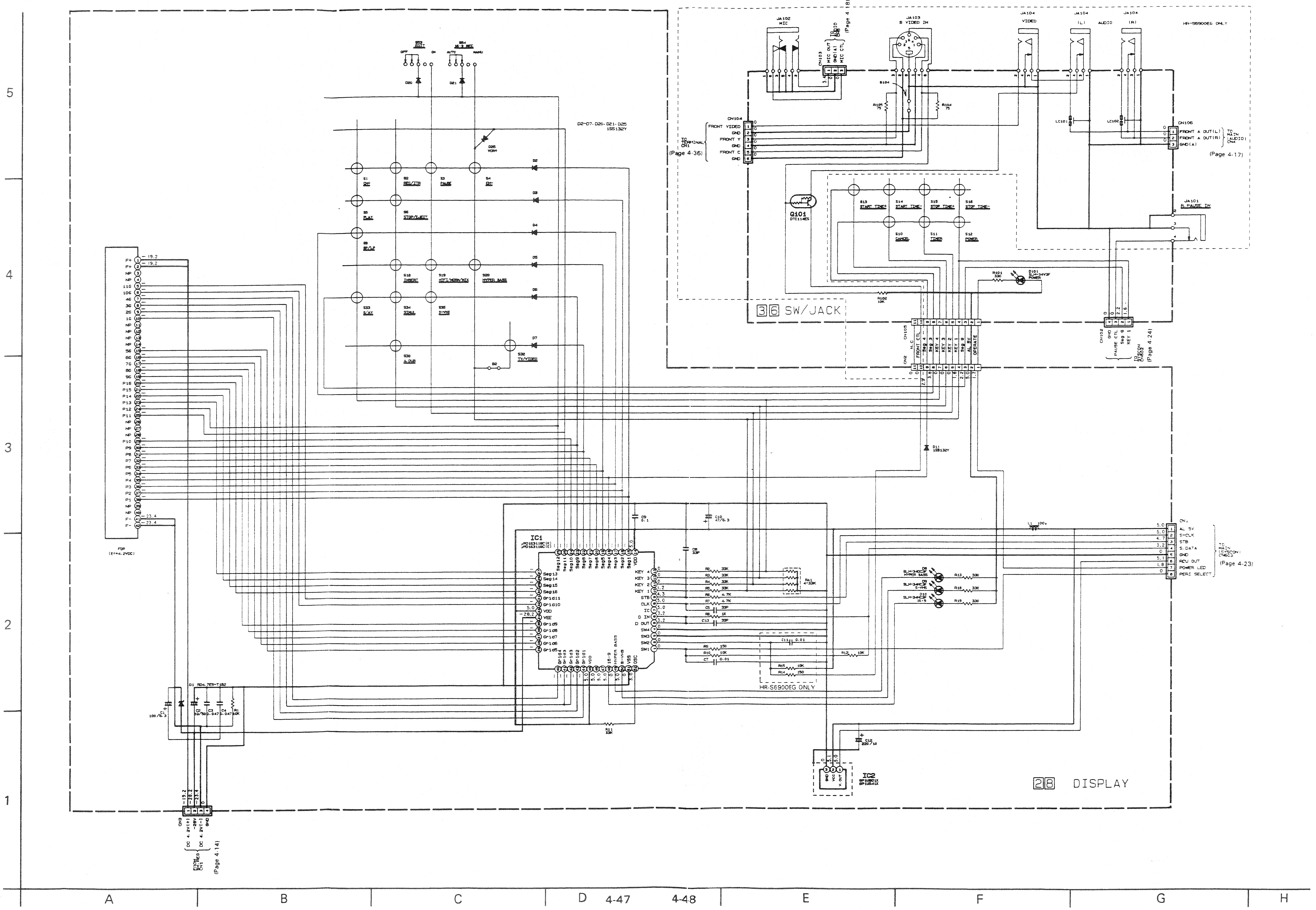
REF. No.	LOCATION
RESISTOR	
R41	B-3D
R42	B-4B
R43	B-2C
R44	B-3D
R45	B-2C
R46	B-3B
R47	B-3B
R48	B-2C
R49	B-4D
R50	B-4D
R51	B-5B
R52	B-3C
R56	B-3D
R57	B-3A

REF. No.	LOCATION
CAPACITOR	
C10	B-3C
C13	B-3C
C18	B-3C
C20	B-4B
C21	B-4B
C23	B-3B
C26	B-3B
C47	B-2D
C50	B-4C
C58	B-2B
C60	B-3D
C61	B-3C

MAIN COMPONENT PARTS LOCATION GUIDE
<AUDIO UNIT BOARD>

REF. No.	LOCATION
IC	
IC1	A-3C
TRANSISTOR	
Q1	B-3C
Q2	B-3C
DIODE	
D1	B-4D
CONNECTOR	
JP1	B-2A
JP2	B-4A
ADJUSTMENT	
R5	B-3C
R11	B-4C
R25	B-3B
R30	B-3B

4.21 DISPLAY AND SW/JACK SCHEMATIC DIAGRAMS


5
4
3
2
1
A
B
C
D
E
F
G
H
S53
EDIT
OFF
ON
S54
16:9 REC
AUTO
MANU
D20
D21
D2~D7, D20, D21, D25
1SS132Y
D25
VCR+
D2
D3
D4
D5
D6
D7
S1
CH+
S2
REC/ITR
S3
PAUSE
S4
CH-
S5
PLAY
S6
STOP/EJECT
S8
SP/LP
S18
INSERT
S19
HIFI/NORM/MIX
S20
HYPER BASS
S33
S/AY
S34
STILL
S35
S-VHS
S30
A.DUB
S32
TV/VIDEO
B2
F+
F+
NP
NP
11G
10G
4G
3G
2G
1G
5G
6G
7G
8G
9G
P16
P15
P14
P13
P12
P11
P10
P9
P8
P7
P6
P5
P4
P3
P2
P1
F-
F-
-19.2
-19.2
-23.4
-23.4
FDP
(Ef=4.2VDC)
IC1
μPD16311GC(K)
μPD16311GC(E)
Seg12
Seg11
Seg10
Seg9
Seg8
Seg7
Seg6
Seg5
Seg4
Seg3
Seg2
Seg1
VDD
Seg13
Seg14
Seg15
Seg16
Grid11
Grid10
VDD
VEE
Grid9
Grid8
Grid7
Grid6
Grid5
Grid4
Grid3
Grid3
Grid2
Grid1
VDD
16:9
HYPER BASS
S-VHS
VSS
OSC
KEY 4
KEY 3
KEY 2
KEY 1
STB
CLK
IC
D IN
D OUT
SW4
SW3
SW2
SW1
5.0
-28.2
C9
0.1
C10
47/6.3
C8
33P
R2 33K
R3 33K
R4 33K
R5 33K
R6 4.7K
R7 4.7K
C5 33P
R8 1K
C13 33P
RA1
4-33K
C11 0.01
R9 150
R10 10K
C7 0.01
R15 10K
R14 150
HR-S6900EG ONLY
R12 10K
R11
33K
D1 RD4.7ES-T1B2
C1
100/6.3
C2
10/50
C3
0.047
C4
0.047
R1
10K
CN3
-19.2
-28.2
-23.4
DC 4.2V(+)
-28V
DC 4.2V(-)
GND
FROM SW. REG CN1
(Page 4-14)
D11
1SS132Y
L1 100μ
CN1
AL 5V
S-CLK
STB
S.DATA
GND
RCU OUT
POWER LED
PERI SELECT
TO MAIN (SYSCON) CN603
(Page 4-23)
D8
SLH-34DC3F
HYPER BASS
D9
SLH-34HC3F
S-VHS
D10
SLH-34HC3F
16:9
R13 330
R18 330
R19 330
C12
220/10
IC2
GP1U801X
GP1U541X
28 DISPLAY
JA102
MIC
CN103
MIC OUT
GND(A)
MIC CTL
TO AUDIO
(Page 4-18)
JA103
S VIDEO IN
R104
R105
75
R104
75
JA104
VIDEO
JA104
(L)
AUDIO
JA104
(R)
HR-S6900EG ONLY
CN104
FRONT VIDEO
GND
FRONT Y
GND
FRONT C
GND
TO TERMINAL CN1
(Page 4-36)
LC101
LC102
CN106
FRONT A OUT(L)
FRONT A OUT(R)
GND(A)
TO MAIN (AUDIO) CN4
(Page 4-17)
Q101
DTC114ES
S13
START TIME+
S14
START TIME-
S15
STOP TIME+
S16
STOP TIME-
S10
CANCEL
S11
TIMER
S12
POWER
JA101
R.PAUSE IN
R101
330
D101
SLH-34V3F
POWER
R102
10K
36 SW/JACK
CN105
CN2
N.C
FRONT CTL
Seg 4
Seg 3
KEY 4
KEY 3
KEY 2
KEY 1
Seg 9
AL 5V
OPERATE
CN102
GND
PAUSE CTL
Seg 9
KEY 1
TO SYSCON CN802
(Page 4-24)

4.22 DISPLAY AND SWITCH/JACK CIRCUIT BOARDS

—DISPLAY—

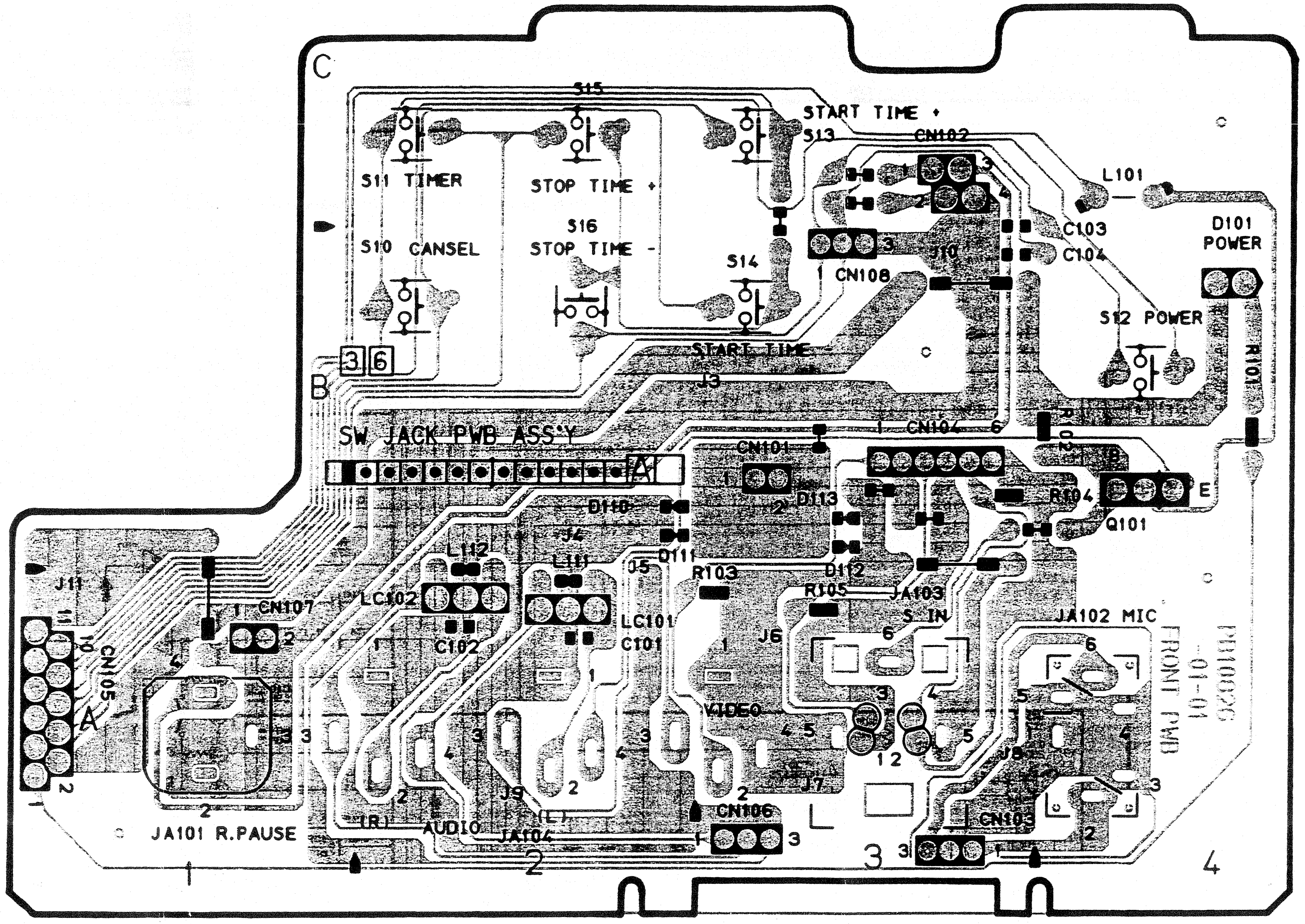
MAIN COMPONENT PARTS LOCATION GUIDE
<DISPLAY PWB>

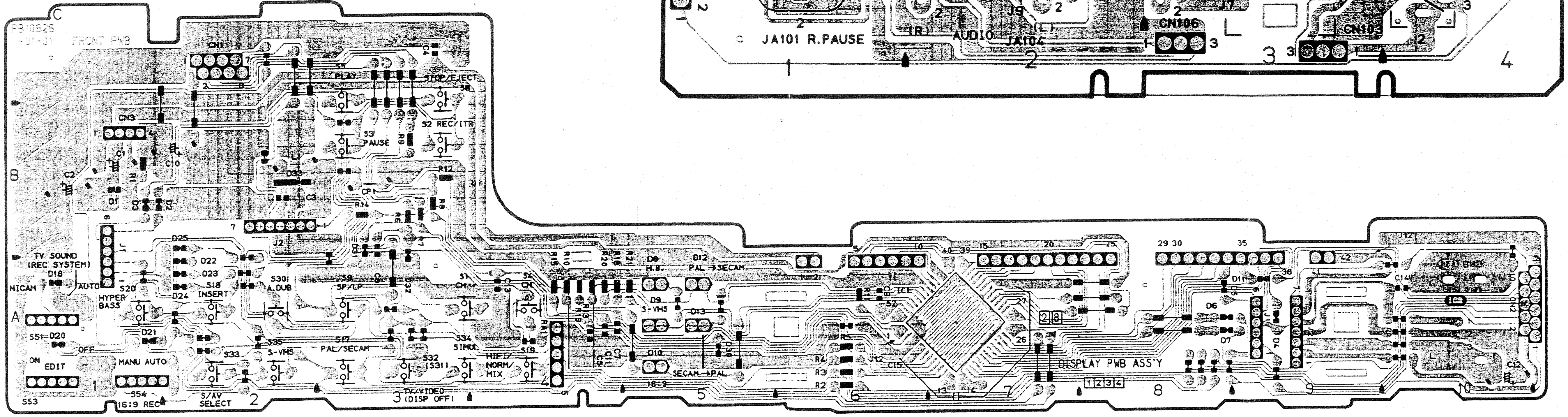
REF No.	LOCATION
IC	
IC1	6A
IC2	10A
DIODE	
D1	1B
D2	2B
D3	1B
D4	9A
D5	9A
D6	8A
D7	8A
D8	5A
D9	5A
D10	5A
D11	9A
D20	1A
D21	1A
D25	2B
CONNECTOR	
CN1	2C
CN2	10A
CN3	1B

—SW/JACK—

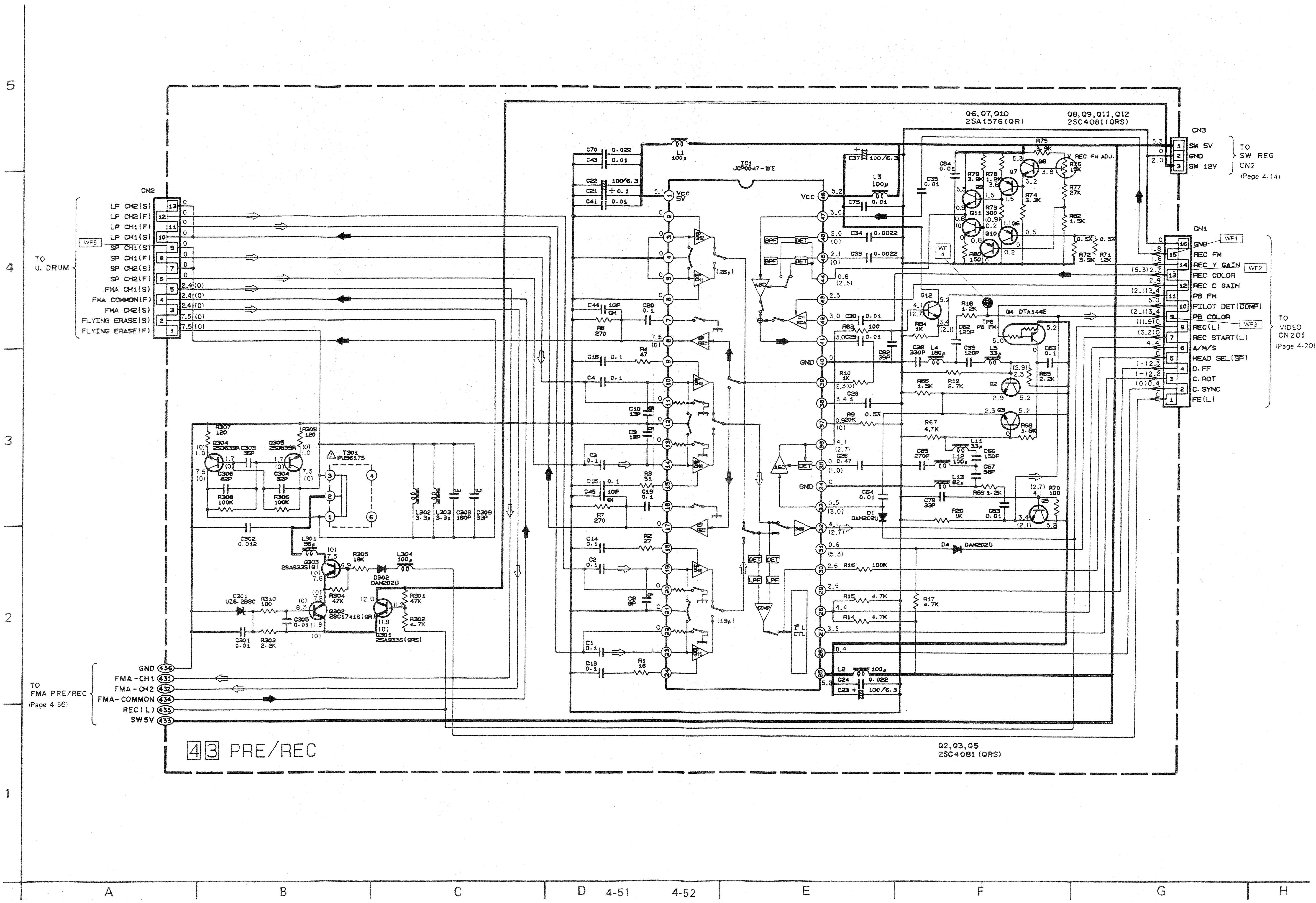
MAIN COMPONENT PARTS LOCATION GUIDE
<SW JACK PWB>

REF No.	LOCATION
TRANSISTOR	
Q101	4B
DIODE	
D101	4B
CONNECTOR	
CN102	3C
CN103	3A
CN104	3B
CN105	1A
CN106	3A


C
B
A
S15
START TIME +
S13
CN102
S11 TIMER
STOP TIME +
S16
S10 CANSEL
STOP TIME -
S14
CN108
L101
C103
C104
D101
POWER
S12 POWER
R101
3
6
START TIME -
J3
SW JACK PWB ASS'Y
CN104
CN101
D113
R104
E
Q101
J11
CN107
LC102
L112
L111
J4
D110
D111
J5
R103
D112
R105
JA103
S IN
JA102 MIC
C102
LC101
C101
J6
VIDEO
CN105
J7
J8
J9
JA101 R.PAUSE
(R)
AUDIO
(L)
JA104
CN106
CN103
PB10026
-01-01
FRONT PWB
1
2
3
4


C
PB10525
-01-01
FRONT PWB
CN1
S5
PLAY
STOP/EJECT
S6
CN3
S3
PAUSE
S2 REC/ITR
C1
C10
C2
R1
R12
D33
C3
CP1
R14
R6
R8
D1
D3
D2
B
J1
J2
D25
D22
D23
TV SOUND
(REC SYSTEM)
D18
NICAM
AUTO
S20
HYPER
BASS
D24
INSERT
S18
S30
A.DUB
S9
SP/LP
S1
CH
R15
R10
R20
R21
D8
H.B.
D12
PAL→SECAM
D9
S-VHS
D13
D11
D6
D7
IC1
IC2
A
S51
D20
OFF
D21
ON
EDIT
S53
MANU AUTO
S54
16:9 REC
S/AV
SELECT
S33
S-VHS
S35
S17
PAL/SECAM
S34
SIMUL
S32
(S31)
HIFI/
NORM/
MIX
TV/VIDEO
(DISP OFF)
S19
D10
SECAM→PAL
16:9
R5
R4
R3
R2
C15
DISPLAY PWB ASS'Y
1 2 3 4
CN2
C12
C14
1
2
3
4
5
6
7
8
9
10

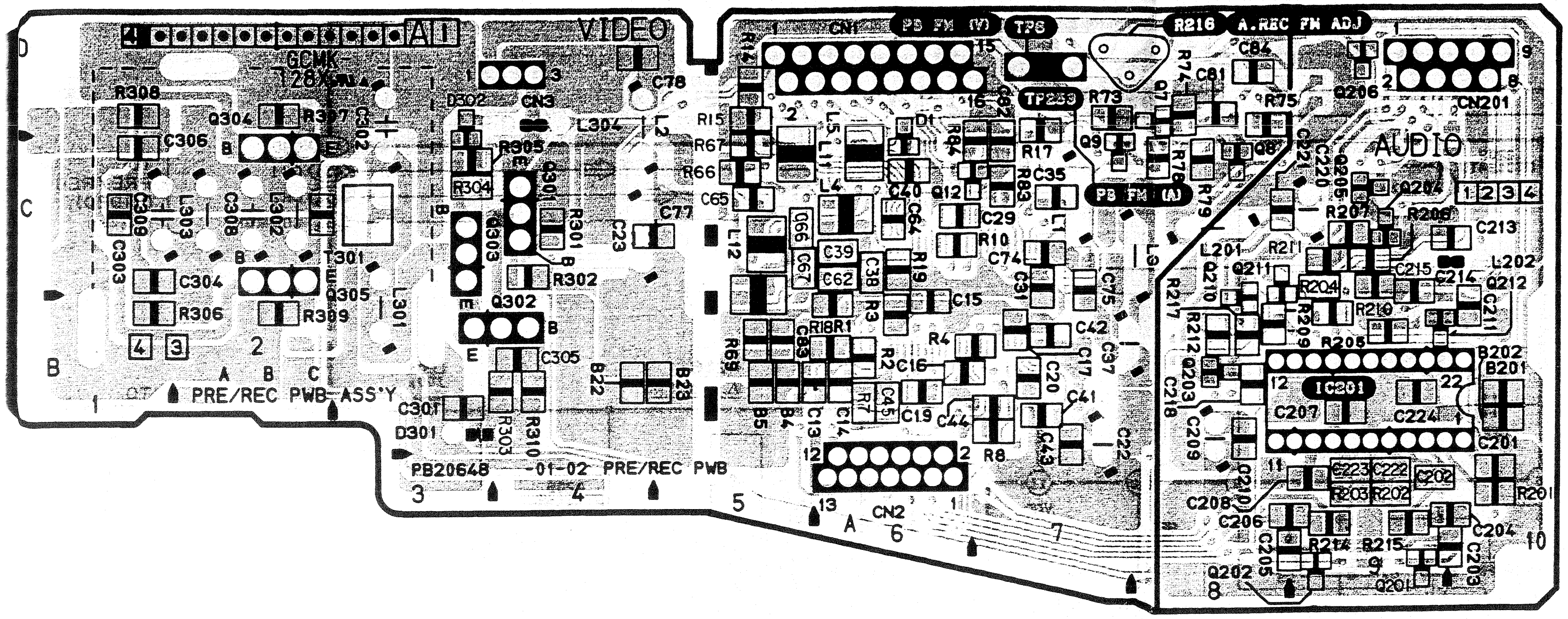
4.23 PRE/REC (VIDEO) SCHEMATIC DIAGRAM



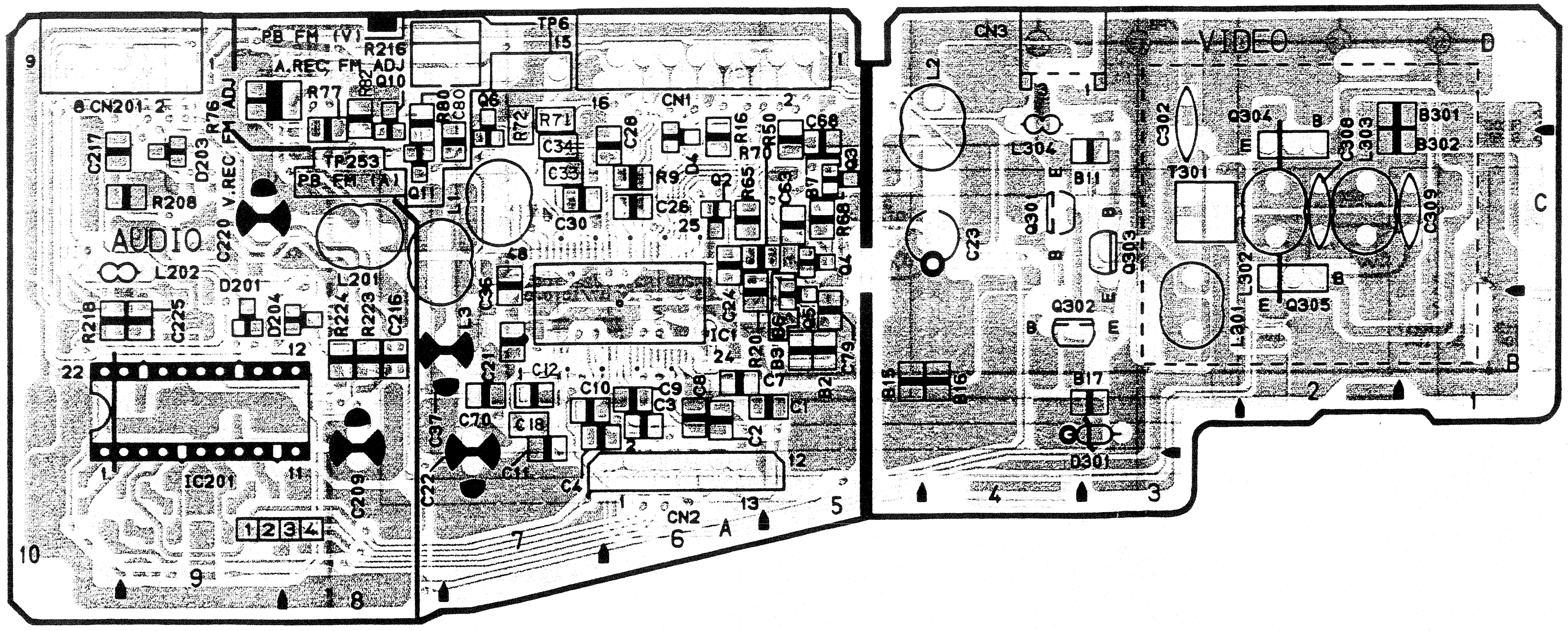
43 PRE/REC
IC1 JCP0047-WE
Q6, Q7, Q10 2SA1576 (QR)
Q8, Q9, Q11, Q12 2SC4081 (QRS)
Q2, Q3, Q5 2SC4081 (QRS)
Q4 DTA144E
Q304 2SD639R
Q305 2SD639R
Q303 2SA933S (Q)
Q302 2SC1741S (QR)
Q301 2SA933S (QRS)
T301 PU56175
D301 UZ8.2BSC
D302 DAN202U
D1 DAN202U
D4 DAN202U
CN2
LP CH2(S)
LP CH2(F)
LP CH1(F)
LP CH1(S)
SP CH1(S)
SP CH1(F)
SP CH2(S)
SP CH2(F)
FMA CH1(S)
FMA COMMON(F)
FMA CH2(S)
FLYING ERASE(S)
FLYING ERASE(F)
TO U. DRUM
WF5
CN3
SW 5V
GND
SW 12V
TO SW REG CN2 (Page 4-14)
CN1
GND
REC FM
REC Y GAIN
REC COLOR
REC C GAIN
PB FM
PILOT DET (COMP)
PB COLOR
REC(L)
REC START(L)
A/M/S
HEAD SEL(SP)
D. FF
C. ROT
C. SYNC
FE(L)
WF1
WF2
WF3
WF4
TO VIDEO CN201 (Page 4-20)
GND 436
FMA-CH1 431
FMA-CH2 432
FMA-COMMON 434
REC(L) 435
SW5V 433
TO FMA PRE/REC (Page 4-56)
V REC FM ADJ.
TP6 PB FM
Vcc 5V
Vcc
GND
AGC
BPF
DET
LPF
COMP
T/L CTL
L1 100μ
L2 100μ
L3 100μ
C37 100/6.3
C23 100/6.3
C22 100/6.3
A
B
C
D
E
F
G
H
1
2
3
4
5

4.24 PRE/REC CIRCUIT BOARD

—FOIL SIDE— (B)


VIDEO
AUDIO
GCMK 128X
CN1
CN2
CN3
CN201
PB FM (V)
TP6
R216
A.REC FM ADJ
TP253
PB FM (A)
IC201
PRE/REC PWB-ASS'Y
PB20648 -01-02 PRE/REC PWB
1 2 3 4 5 6 7 8 9 10
A B C D

—COMPONENT SIDE— (A)


PB FM (V)
TP6
R216
A.REC FM ADJ
CN201
V.REC FM ADJ
TP253
PB FM (A)
AUDIO
IC1
IC201
CN1
CN2
CN3
VIDEO
1 2 3 4 5 6 7 8 9 10
A B C D

MAIN COMPONENT PARTS LOCATION GUIDE
<PRE/REC PWB>

REF No.	LOCATION
IC	
IC1	A-6B
IC201	B-9B
TRANSISTOR	
Q2	A-6C
Q3	A-6C
Q4	A-6C
Q5	A-6B
Q6	A-7D
Q7	B-8D
Q8	B-8C
Q9	B-7C
Q10	A-8D
Q11	A-8C
Q12	B-6C
Q201	B-9A
Q202	B-9A
Q203	B-8B
Q204	B-9C
Q205	B-9C
Q206	B-9D
Q210	B-8B
Q211	B-8C
Q212	B-9B
Q301	B-3C
Q302	B-3B
Q303	B-3C
Q304	B-2C
Q305	B-2C
DIODE	
D1	B-6D
D4	A-6C
D201	A-9B
D203	A-9C
D204	A-8B
D301	B-3B
D302	B-3D
CONNECTOR	
CN1	B-6D
CN2	B-6A
CN3	B-4D
CN201	B-10D
ADJUSTMENT	
R76	A-9D
R216	B-8D
TP	
TP6	B-7D
TP253	B-7C

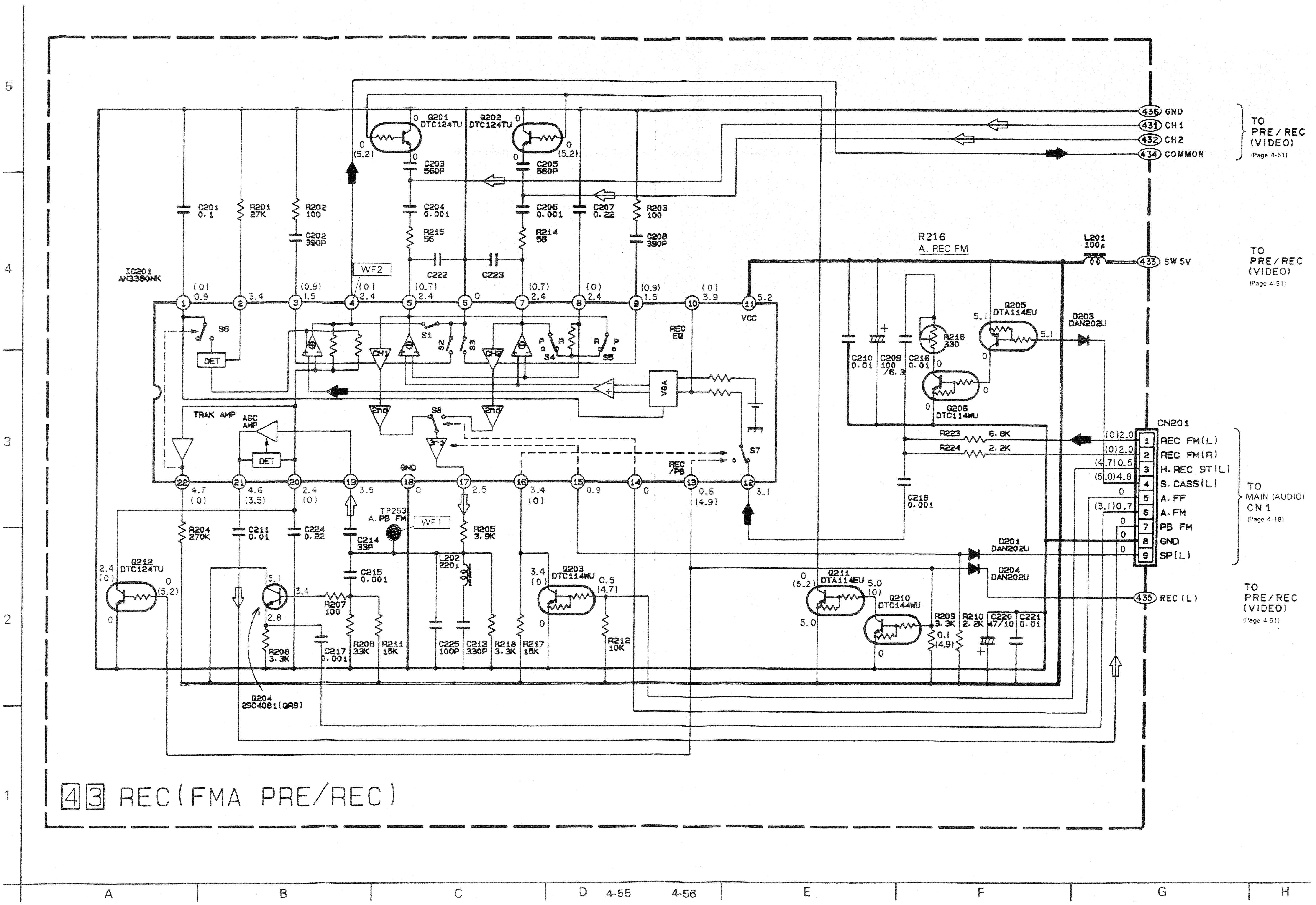
LEADLESS COMPONENT PARTS LOCATION GUIDE
<PRE/REC PWB>

REF No.	LOCATION
IC	
IC1	A-6B
TRANSISTOR	
Q2	A-6C
Q3	A-6C
Q4	A-6C
Q5	A-6B
Q6	A-7D
Q7	B-8D
Q8	B-8C
Q9	B-7C
Q10	A-8D
Q11	A-8C
Q12	B-6C
Q201	B-9A
Q202	B-9A
Q203	B-8B
Q204	B-9C
Q205	B-9C
Q206	B-9D
Q210	B-8B
Q211	B-8C
Q212	B-9B
DIODE	
D1	B-6D
D4	A-6C
D201	A-9B
D203	A-9C
D204	A-8B
D302	B-3D
RESISTOR	
R1	B-6B
R2	B-6B
R3	B-6B
R4	B-6B
R7	B-6B
R8	B-7B
R9	A-6C
R10	B-6C
R14	B-5D
R15	B-5D
R16	A-6C
R17	B-7C
R18	B-6B
R19	B-6C
R20	A-6B
R50	A-5C
R65	A-6C
R66	B-5C
R67	B-5C
R68	A-5C
R69	B-5B
R70	A-6C
R71	A-7D
R72	A-7D
R73	B-7D
R74	B-8D
R75	B-8D
R77	A-8D
R78	B-8C
R79	B-8C
R80	A-8D
R82	A-8D
R83	B-7C
R84	B-6C
R201	B-10A
R202	B-9A
R203	B-9A
R204	B-9C
R205	B-9B
R206	B-9C
R207	B-9C
R208	A-9C
R209	B-8B
R210	B-9B
R211	B-9C

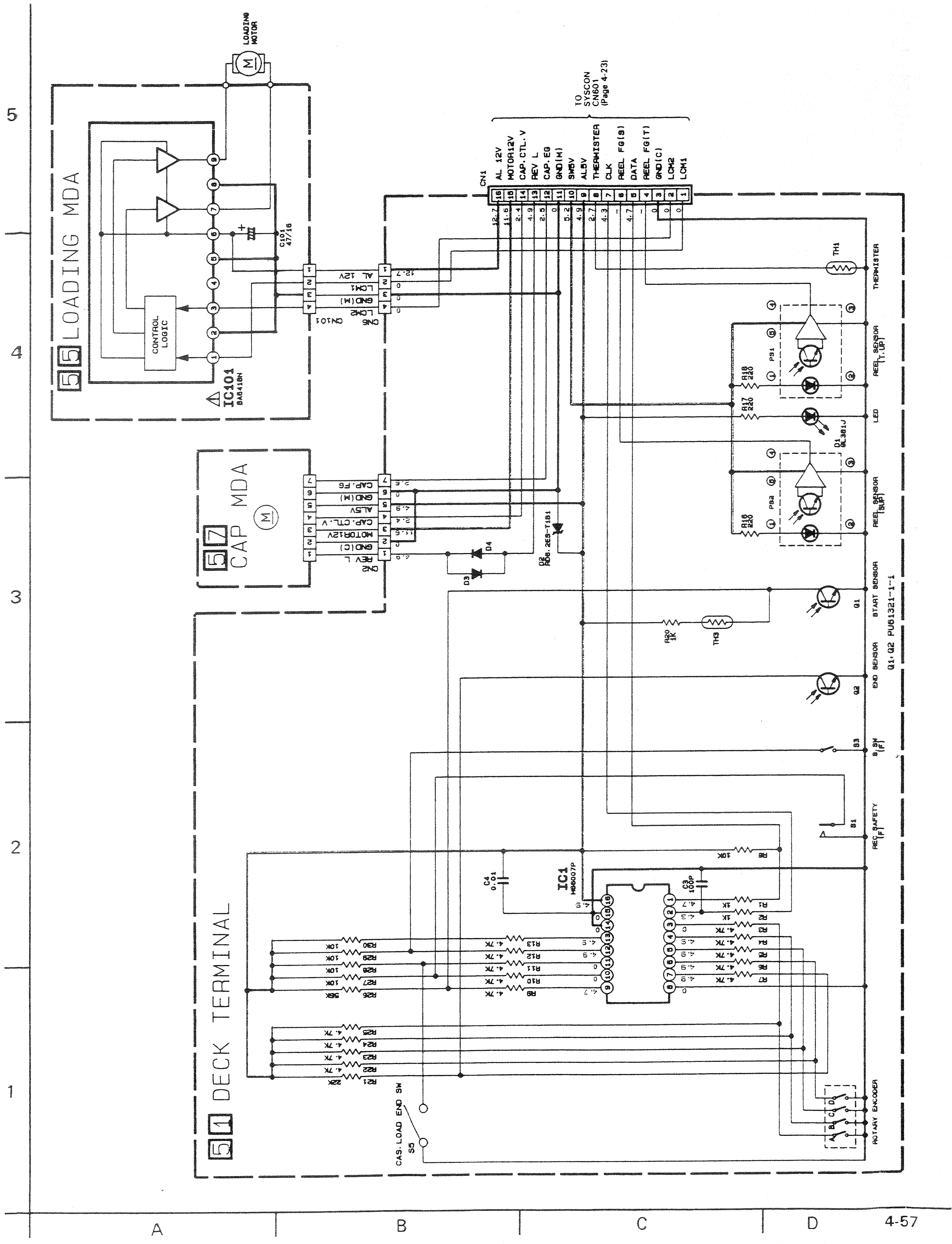
REF No.	LOCATION
RESISTOR	
R212	B-8B
R214	B-9A
R215	B-9A
R217	B-8B
R218	A-10B
R223	A-8B
R224	A-8B
R301	B-4C
R302	B-4C
R303	B-4B
R304	B-3C
R305	B-3C
R306	B-1B
R307	B-2D
R308	B-1D
R309	B-2B
R310	B-4B
CAPACITOR	
C1	A-5B
C2	A-6B
C3	A-6B
C4	A-7B
C7	A-6B
C8	A-6B
C9	A-6B
C10	A-7B
C11	A-7B
C12	A-7B
C13	A-7B
C14	B-6B
C15	B-6B
C16	B-6B
C17	B-7B
C18	A-7B
C19	B-6B
C20	B-7B
C21	A-7B
C24	A-6C
C26	A-6C
C28	A-6C
C29	B-6C
C30	A-7C
C31	A-7B
C33	A-7C
C34	A-7C
C35	B-7C
C36	A-7C
C38	B-6C
C39	B-6C
C40	B-6C
C41	B-7B
C42	B-7B
C43	B-7B
C44	B-7B
C62	B-6C
C63	A-5C
C64	B-6C
C65	B-5C
C66	B-5C
C67	B-5C
C68	A-5D
C70	A-7B
C74	B-7C
C77	B-4C
C79	A-5B
C80	A-7D
C81	B-8D
C82	B-7D
C83	B-5B
C84	B-8D
C201	B-10A
C202	B-9A
C203	B-10A
C204	B-10A
C205	B-8A
C206	B-8A
C207	B-9B
C208	B-9A
C210	B-8B
C211	B-10B

REF No.	LOCATION
CAPACITOR	
C213	B-10C
C214	B-9C
C215	B-9C
C216	A-8B
C217	A-10C
C218	B-8B
C221	B-8C
C222	B-9A
C223	B-9A
C224	B-9B
C225	A-9B
C301	B-3B
C303	B-1C
C304	B-1C
C305	B-4B
C306	B-1C

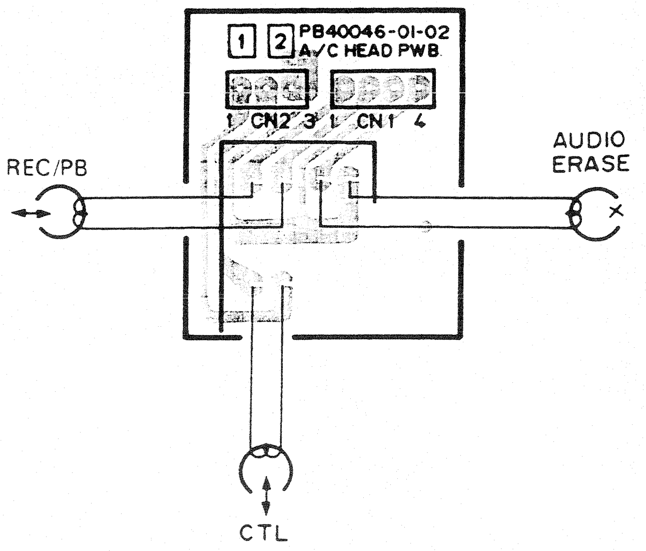
4.25 PRE/REC (FM AUDIO) SCHEMATIC DIAGRAM


IC201
AN3380NK
Q201
DTC124TU
Q202
DTC124TU
C201
0.1
R201
27K
R202
100
C202
390P
C203
560P
C204
0.001
R215
56
C205
560P
C206
0.001
R214
56
C207
0.22
R203
100
C208
390P
C222
C223
WF2
WF1
REC EQ
VCC
S1
S2
S3
S4
S5
S6
S7
S8
CH1
CH2
2nd
3rd
DET
VGA
TRAK AMP
AGC AMP
REC /PB
GND
R216
A. REC FM
L201
100μ
SW 5V
GND
CH1
CH2
COMMON
TO PRE/REC (VIDEO) (Page 4-51)
C210
0.01
C209
100 /6.3
C216
0.01
R216
330
Q205
DTA114EU
Q206
DTC114WU
D203
DAN202U
CN201
R223
6.8K
R224
2.2K
C218
0.001
REC FM(L)
REC FM(R)
H. REC ST(L)
S. CASS(L)
A. FF
A. FM
PB FM
GND
SP(L)
TO MAIN (AUDIO) CN1 (Page 4-18)
D201
DAN202U
D204
DAN202U
REC (L)
Q211
DTA114EU
Q210
DTC144WU
R209
3.3K
R210
2.2K
C220
47/10
C221
0.01
Q212
DTC124TU
R204
270K
C211
0.01
C224
0.22
TP253
A. PB FM
C214
33P
C215
0.001
R205
3.9K
L202
220μ
Q203
DTC114WU
R212
10K
Q204
2SC4081(QRS)
R207
100
R208
3.3K
C217
0.001
R206
33K
R211
15K
C225
100P
C213
330P
R218
3.3K
R217
15K
43 REC(FMA PRE/REC)
A
B
C
D
E
F
G
H
1
2
3
4
5

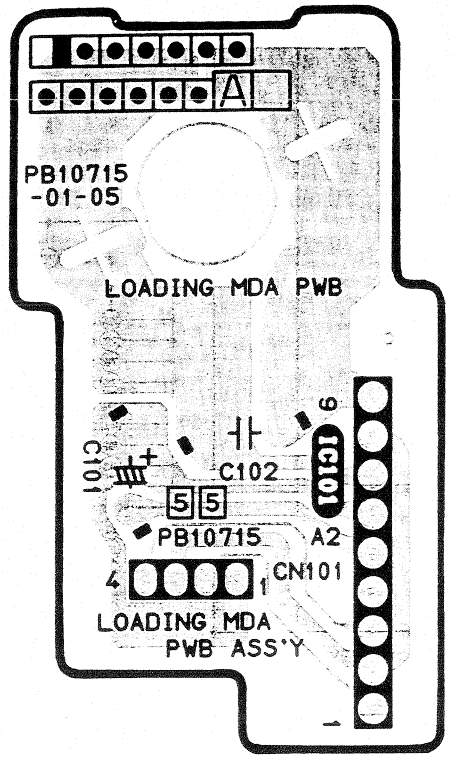
4.26 DECK TERMINAL SCHEMATIC DIAGRAM, DECK TERMINAL, LOADING MDA & A/C HEAD CIRCUIT BOARDS


5
4
3
2
1
A
B
C
D
LOADING MOTOR
55 LOADING MDA
IC101 BA6418N
CONTROL LOGIC
C101 47/16
CN101
CN6
AL 12V
LCM1
GND(M)
LCM2
57 CAP MDA
CN2
CAP.FG
GND(M)
AL5V
CAP.CTL.V
MOTOR12V
GND(C)
REV L
TO SYSCON CN601 (Page 4-23)
CN1
AL 12V
MOTOR12V
CAP.CTL.V
REV L
CAP.EG
GND(M)
SW5V
AL5V
THERMISTER
CLK
REEL FG(S)
DATA
REEL FG(T)
GND(C)
LCM2
LCM1
12.7
11.6
2.4
4.9
2.5
0
5.2
4.9
2.7
4.3
-
4.7
-
0
0
0
TH1
THERMISTER
PS1
REEL SENSOR (T.UP)
R18 220
R17 220
D1 GL381J
LED
PS2
REEL SENSOR (SUP)
R16 220
D2 RD6.2ES-T1B1
D3
D4
Q1
START SENSOR
R20 1K
TH3
Q1, Q2 PU61321-1-1
Q2
END SENSOR
S3
S.SW (F)
S1
REC SAFETY (F)
IC1 M58007P
C4 0.01
C3 100P
R8 10K
R1 1K
R2 1K
R3 4.7K
R4 4.7K
R5 4.7K
R6 4.7K
R7 4.7K
R13 4.7K
R12 4.7K
R11 4.7K
R10 4.7K
R9 4.7K
R30 10K
R29 10K
R28 10K
R27 10K
R26 56K
R25 4.7K
R24 4.7K
R23 4.7K
R22 4.7K
R21 22K
CAS.LOAD END SW S5
ROTARY ENCODER
51 DECK TERMINAL

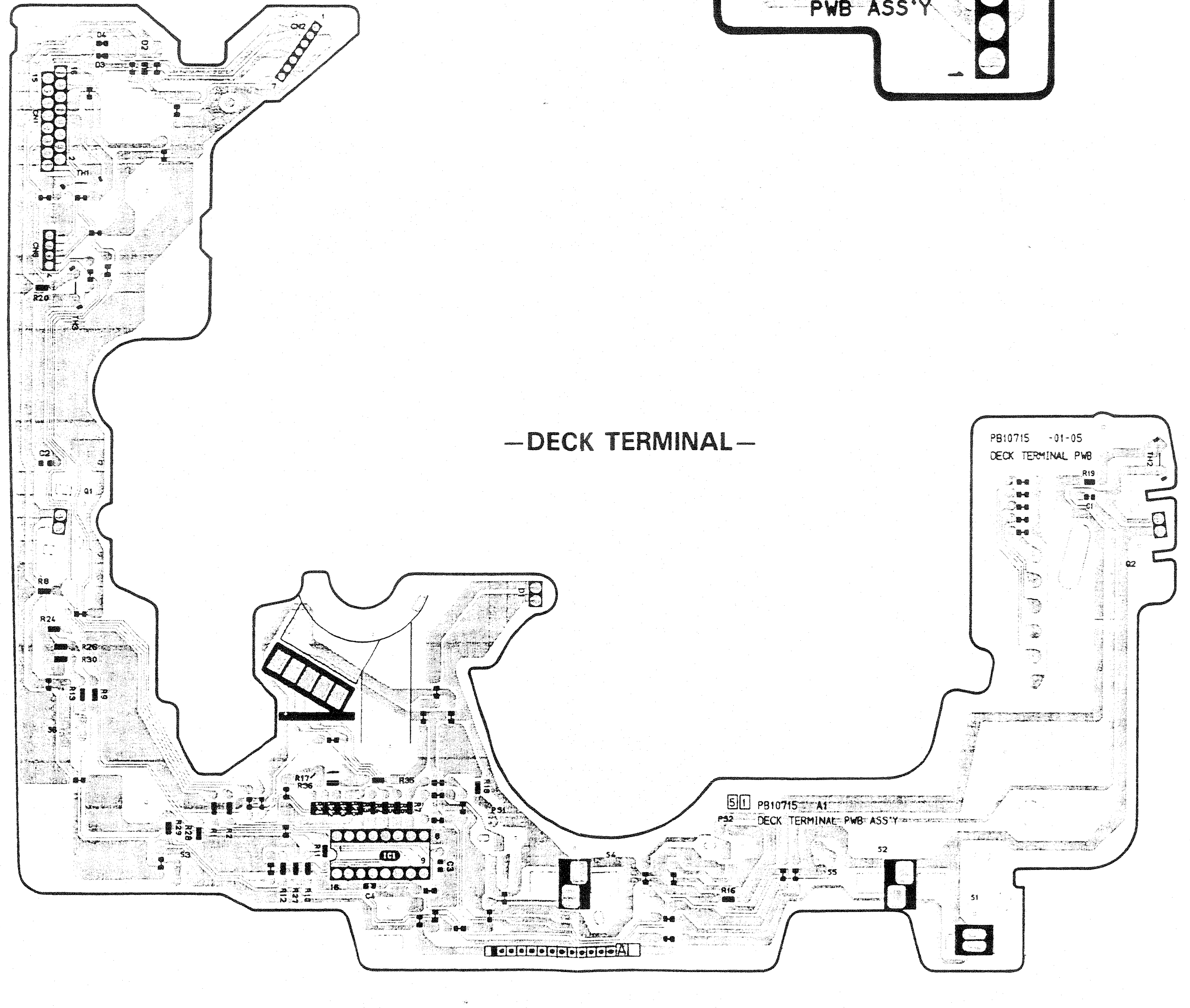
—A/C HEAD—


1 2 PB40046-01-02 A/C HEAD PWB
CN2
CN1
1
3
1
4
REC/PB
AUDIO ERASE
CTL

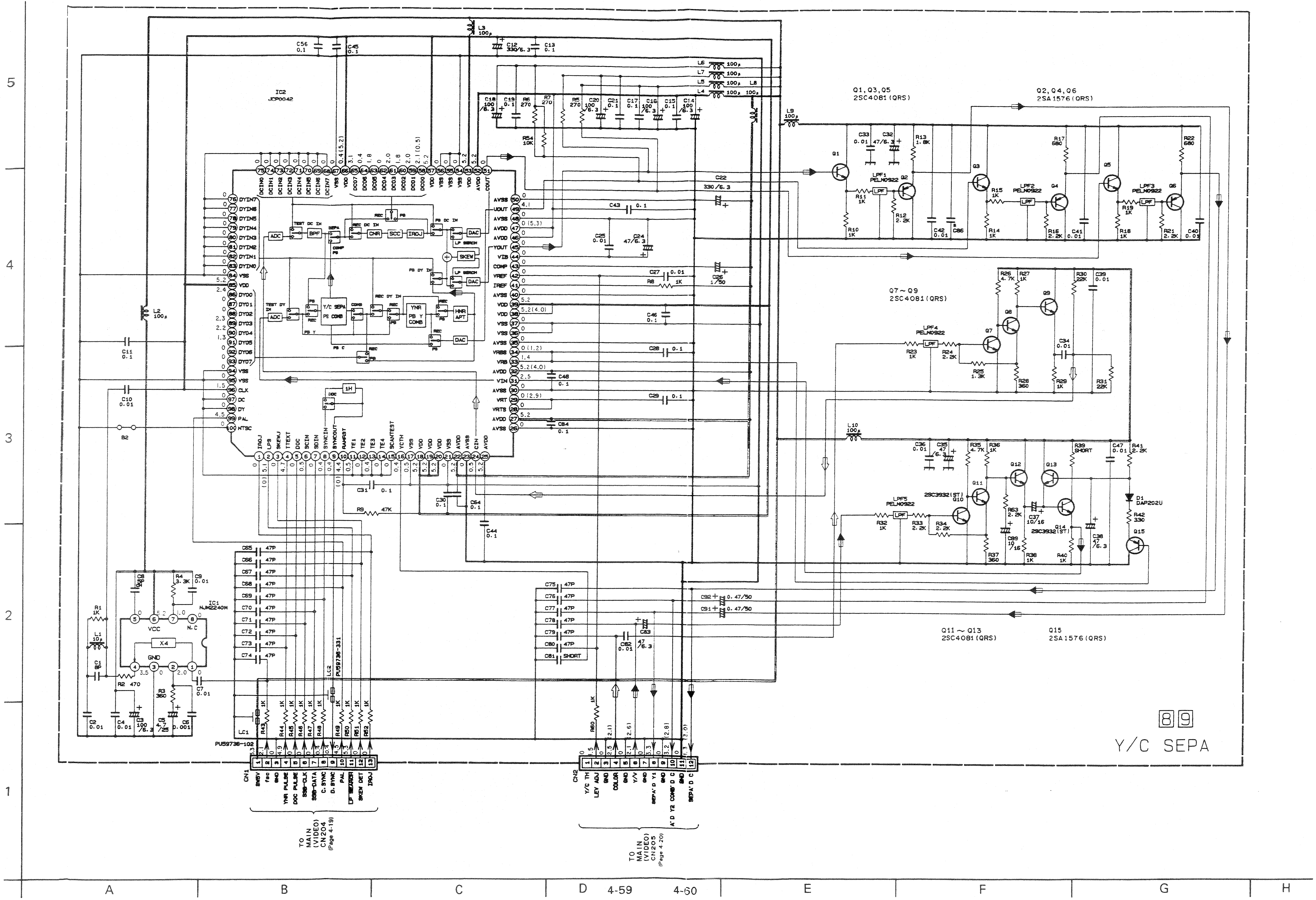
—LOADING MDA—


PB10715 -01-05
LOADING MDA PWB
C101
C102
IC101
55
PB10715
A2
CN101
4
1
6
1
LOADING MDA PWB ASS'Y

—DECK TERMINAL—

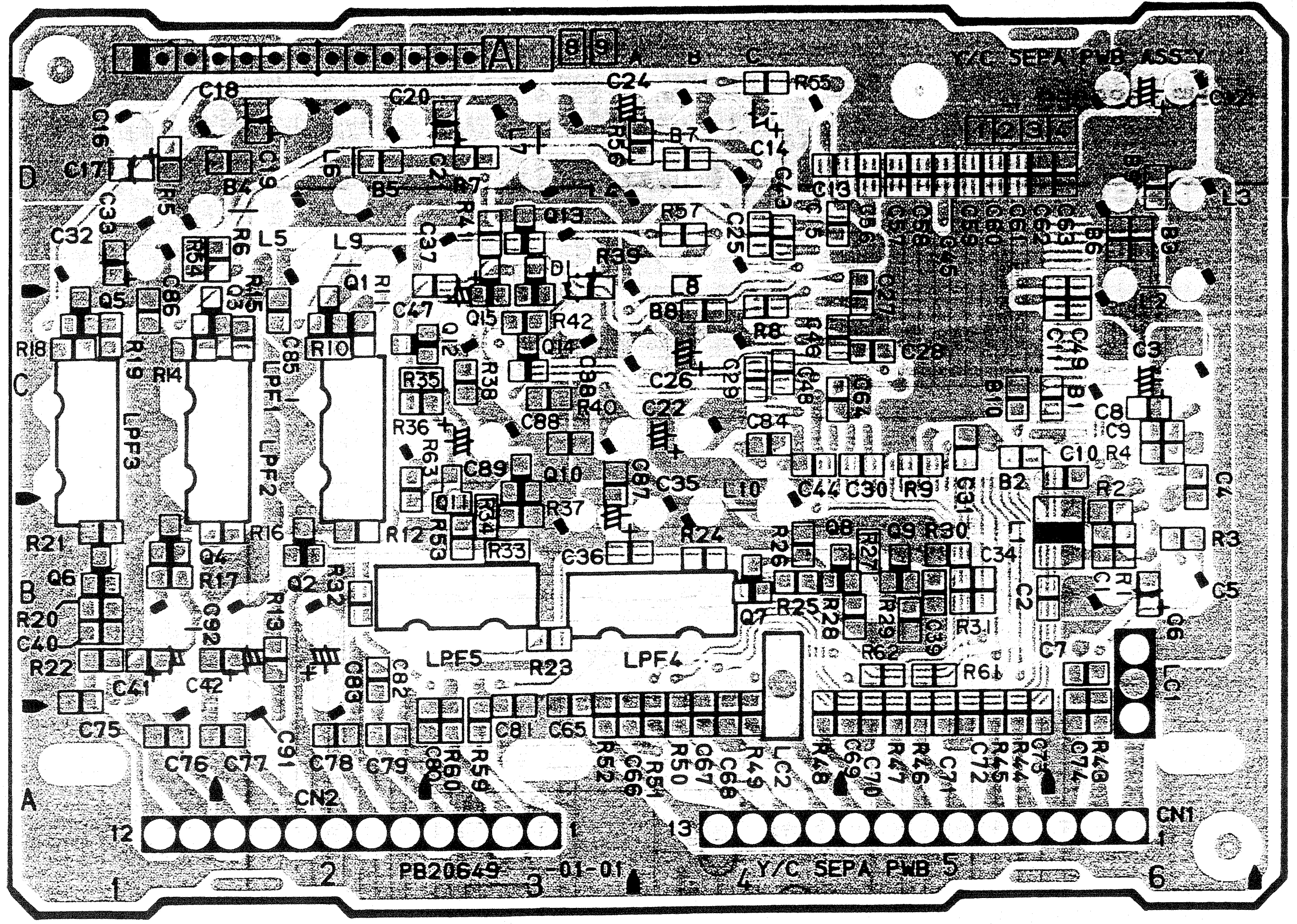

PB10715 -01-05
DECK TERMINAL PWB
51 PB10715 A1
DECK TERMINAL PWB ASS'Y
IC1
S1
S2
S3
S4
S5

4.27 Y/C SEP SCHEMATIC DIAGRAM

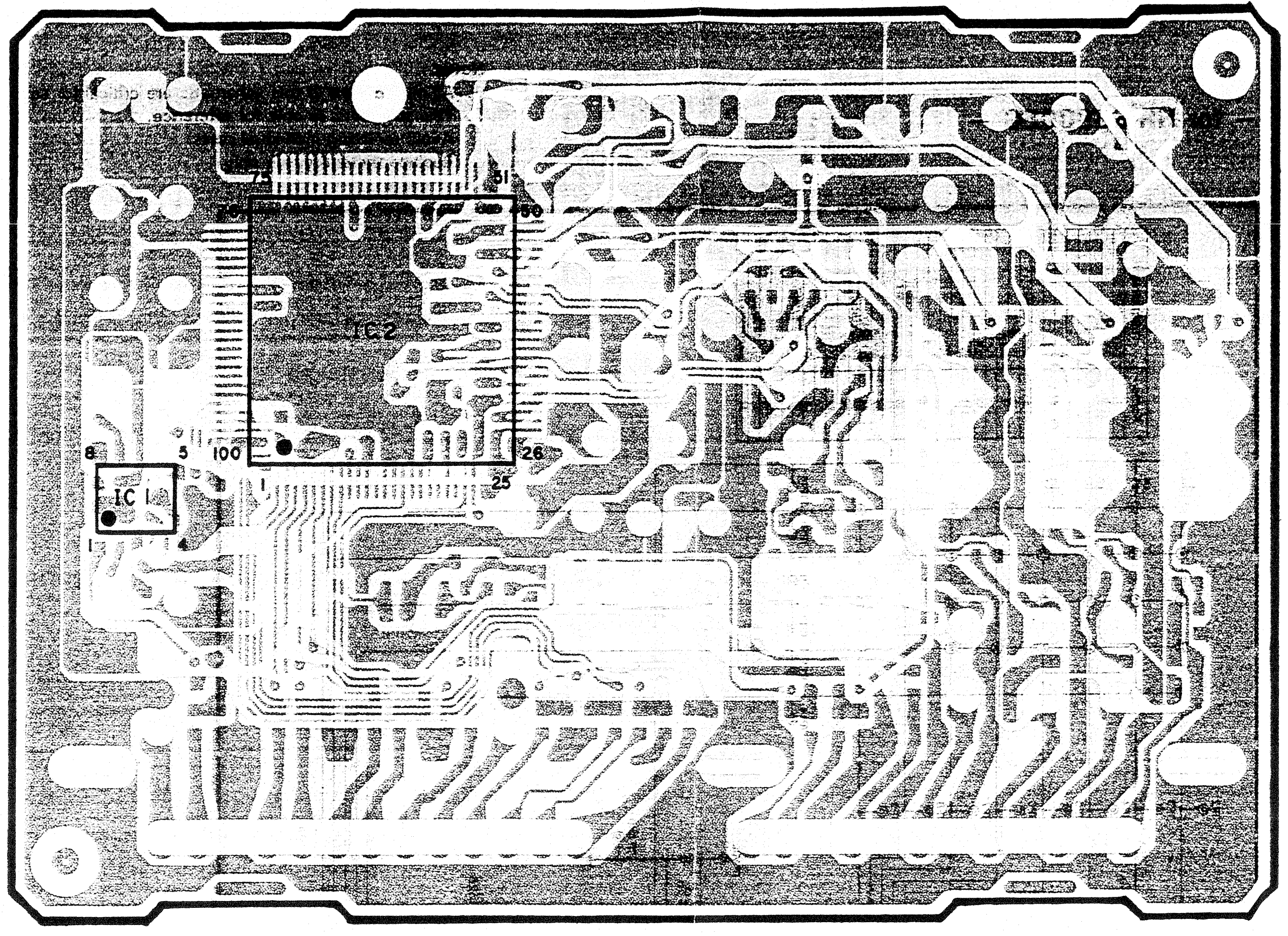

IC2
JCP0042
IC1
NJM2240M
Q1, Q3, Q5
2SC4081 (QRS)
Q2, Q4, Q6
2SA1576 (QRS)
Q7 ~ Q9
2SC4081 (QRS)
Q11 ~ Q13
2SC4081 (QRS)
Q15
2SA1576 (QRS)
2SC3932 (ST)
Q10
2SC3932 (ST)
Q14
D1
DAP202U
LPF1
PELN0922
LPF2
PELN0922
LPF3
PELN0922
LPF4
PELN0922
LPF5
PELN0922
Y/C SEPA
PS COMB
YNR
PB Y
COMB
HNR
APT
ADC
BPF
CNR
SCC
IROJ
DAC
SKEW
LP SERCH
1H
X4
VCC
GND
N.C
PU59736-102
PU59736-331
LC1
LC2
CN1
SWBV
fsc
GND
YNR PULSE
DOC PULSE
SSB-CLK
SSB-DATA
C.SYNC
D.SYNC
PAL
LP SEARCH
SKEW DET
IROJ
TO MAIN (VIDEO) CN204 (Page 4-19)
CN2
Y/C TH
LEV ADJ
GND
COLOR
GND
Y/V
SEPA'D Y1
GND
A'D Y2 COMB'D C
GND
SEPA'D C
TO MAIN (VIDEO) CN205 (Page 4-20)
89
Y/C SEPA
A
B
C
D
E
F
G
H
1
2
3
4
5

4.28 Y/C SEP CIRCUIT BOARD

—FOIL SIDE (B)—


Y/C SEPA PWB ASSY
PB20649-01-01
Y/C SEPA PWB
A
B
C
D
1
2
3
4
5
6
CN1
CN2
12
13
1
LPF1
LPF2
LPF3
LPF4
LPF5
LC1
LC2
L1
L3
L5
L6
L9
L10
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
D1
R18
R19
R14
R20
R21
R22
R23
R24
R25
R33
R35
R36
R37
R38
R40
R42
R57
R61
R63
C17
C18
C20
C24
C32
C36
C40
C41
C42
C44
C47
C75
C76
C77
C78
C79
C81
C84
C89
C91
C92

—COMPONENT SIDE (A)—


IC2
IC1
1
25
26
50
51
75
76
100
8
5

MAIN COMPONENT PARTS LOCATION GUIDE
<Y/C SEPA PWB>

REF No.	LOCATION
IC	
IC1	A-6B
IC2	A-5C
TRANSISTOR	
Q1	B-2C
Q2	B-2B
Q3	B-1C
Q4	B-1B
Q5	B-1C
Q6	B-1B
Q7	B-4B
Q8	B-4B
Q9	B-5B
Q10	B-3C
Q11	B-3C
Q12	B-3C
Q13	B-3D
Q14	B-3C
Q15	B-3D
DIODE	
D1	B-3D
CONNECTOR	
CN1	B-6A
CN2	B-2A

LEADLESS COMPONENT PARTS LOCATION GUIDE
<Y/C SEPA PWB>

REF No.	LOCATION
TRANSISTOR	
Q1	B-2C
Q2	B-2B
Q3	B-1C
Q4	B-1B
Q5	B-1C
Q6	B-1B
Q7	B-4B
Q8	B-4B
Q9	B-5B
Q10	B-3C
Q11	B-3C
Q12	B-3C
Q13	B-3D
Q14	B-3C
Q15	B-3D
DIODE	
D1	B-3D
RESISTOR	
R1	B-6B
R2	B-6B
R3	B-6B
R4	B-6C
R5	B-1D
R6	B-2D
R7	B-3D
R8	B-4C
R9	B-5C

REF No.	LOCATION
RESISTOR	
R10	B-2C
R11	B-2C
R12	B-2B
R13	B-2B
R14	B-1C
R15	B-2C
R16	B-2B
R17	B-1B
R18	B-1C
R19	B-1C
R20	B-1B
R21	B-1B
R22	B-1B
R23	B-3B
R24	B-4B
R25	B-4B
R26	B-4B
R27	B-5B
R28	B-4B
R29	B-5B
R30	B-5B
R31	B-5B
R32	B-2B
R33	B-3B
B34	B-3B
R35	B-2B
R36	B-2B
R37	B-3B
R38	B-3C
R39	B-3D

REF No.	LOCATION
CAPACITOR	
R40	B-3C
R41	B-3D
R42	B-3C
R43	B-6A
R44	B-5A
R45	B-5A
R46	B-5A
R47	B-5A
R48	B-4A
R49	B-4A
R50	B-4A
R51	B-4A
R52	B-3A
R53	B-3B
R54	B-1D
R55	B-4D
R56	B-4D
R57	B-4D
R59	B-3A
R60	B-3A
R61	B-5B
R62	B-5B
R63	B-2C

REF No.	LOCATION
CAPACITOR	
C1	B-6B
C2	B-5B
C4	B-6C
C6	B-6B
C7	B-6B
C8	B-6C
C9	B-6C
C10	B-6C
C11	B-6C
C13	B-4D
C15	B-4D
C17	B-1D
C19	B-2D
C21	B-3D
C25	B-4D
C27	B-5C
C28	B-5C
C29	B-4C
C30	B-5C
C31	B-5C
C33	B-1D
C34	B-5B
C36	B-3B
C39	B-5B
C40	B-1B
C41	B-1B
C42	B-2B
C43	B-4D
C44	B-4C
C45	B-5D

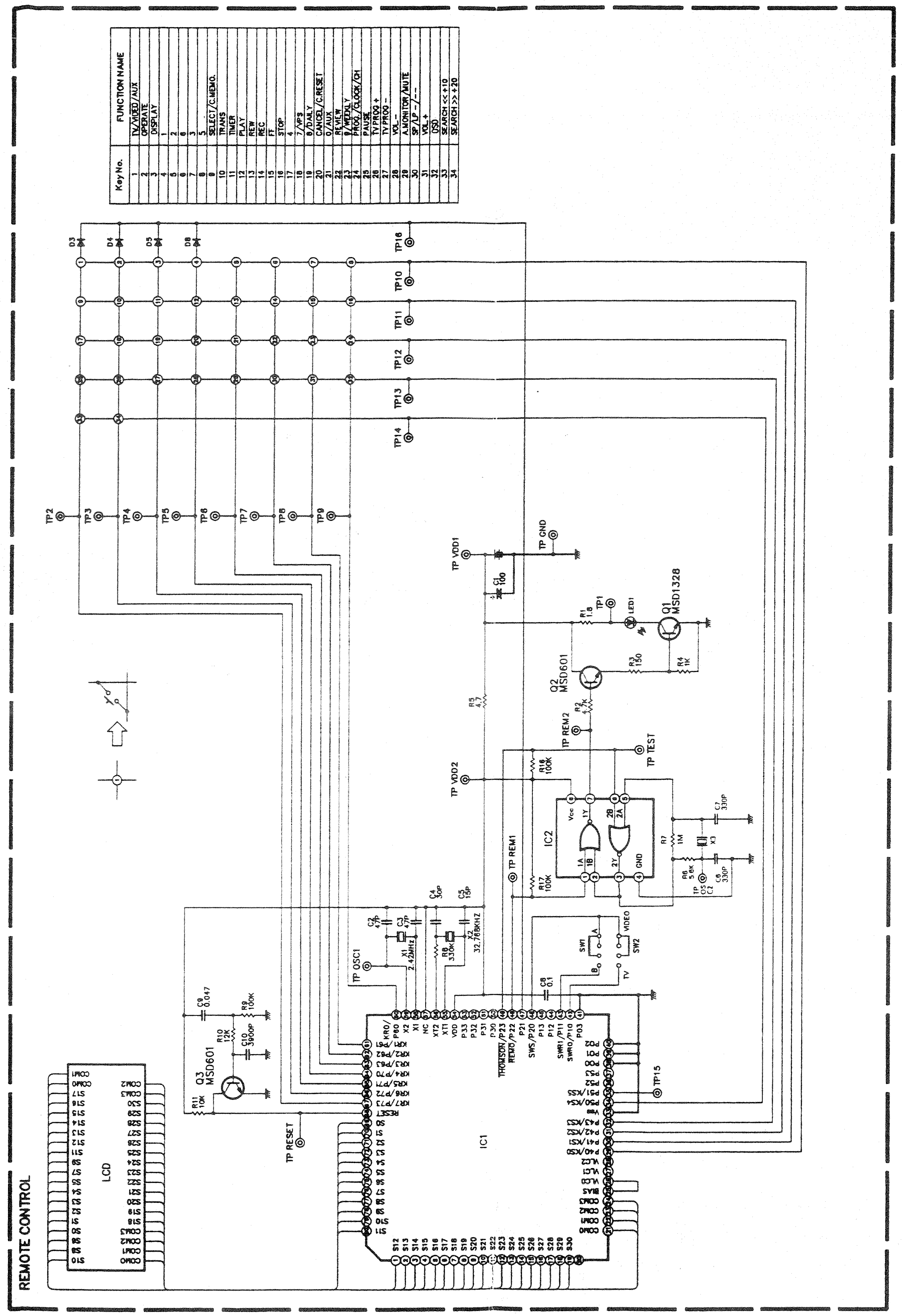
REF No.	LOCATION
CAPACITOR	
C46	B-4C
C47	B-3D
C48	B-4C
C49	B-6C
C56	B-5D
C57	B-5D
C58	B-5D
C59	B-5D
C60	B-5D
C61	B-5D
C62	B-5D
C62	B-5D
C63	B-6D
C64	B-5C
C65	B-3A
C66	B-3A
C67	B-4A
C68	B-4A
C69	B-5A
C70	B-5A
C71	B-5A
C72	B-5A
C73	B-5A
C74	B-6A
C75	B-1A
C76	B-1A
C77	B-2A
C78	B-2A
C79	B-2A
C80	B-3A

REF No.	LOCATION
CAPACITOR	
C81	B-3A
C82	B-2B
C84	B-4C
C85	B-2C
B86	B-1C
C87	B-3C
C88	B-3C

4.29 REMOTE CONTROLLER SCHEMATIC DIAGRAM

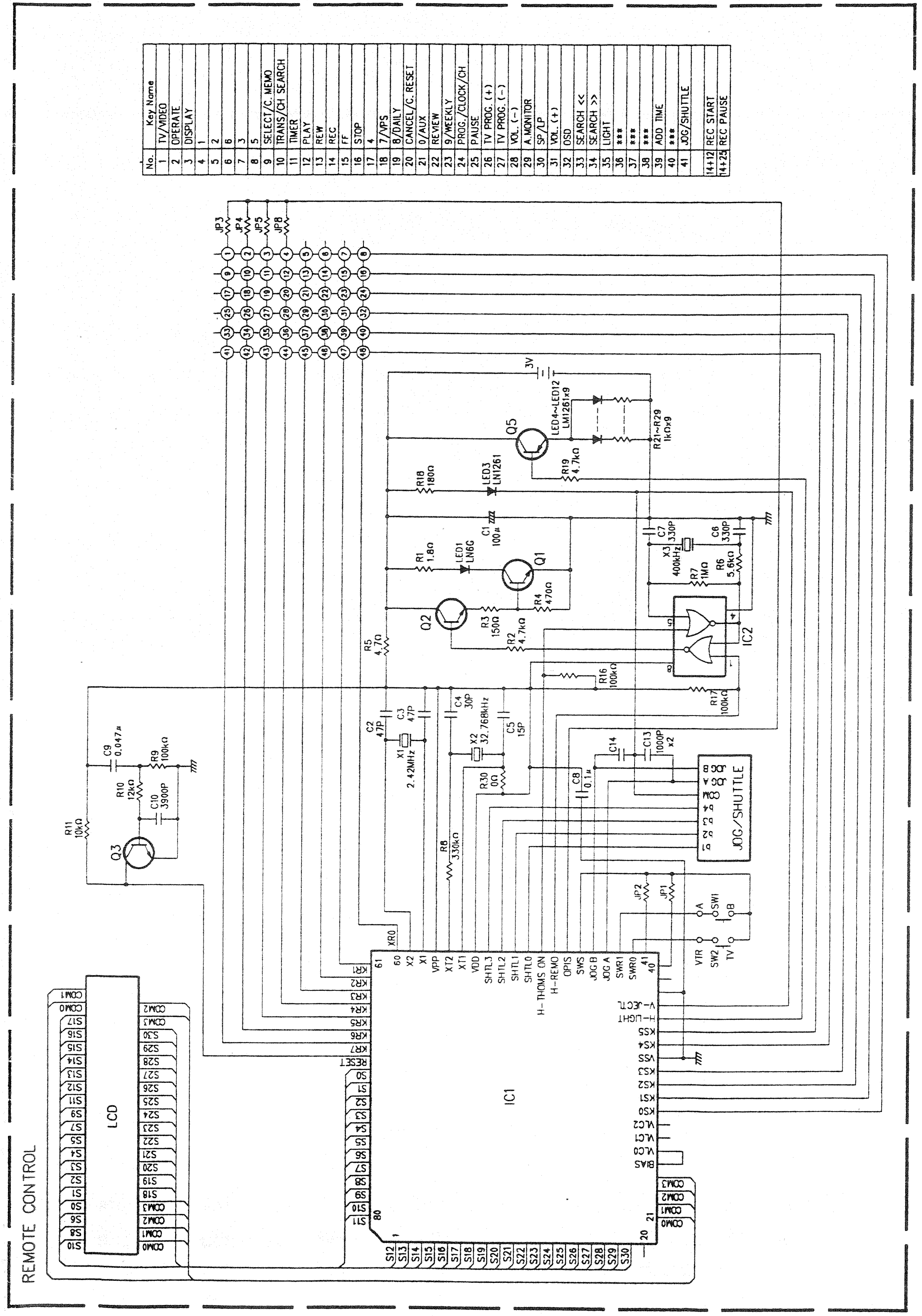
Notes:
1. All parts slown in this schematic are critical for safety.
2. This schematic is only for reference.
   Avoid replacing individual parts.
   Replace the entire unit only.

– for HR-S5900EG –


REMOTE CONTROL
LCD
IC1
IC2
Q1 MSD1328
Q2 MSD601
Q3 MSD601
X1 2.42MHz
X2 32.768KHZ
SW1
SW2
TV
VIDEO
TP RESET
TP OSC1
TP VDD1
TP VDD2
TP GND
TP REM1
TP REM2
TP TEST
TP15
TP1
LED1
D3
D4
D5
D8
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP16

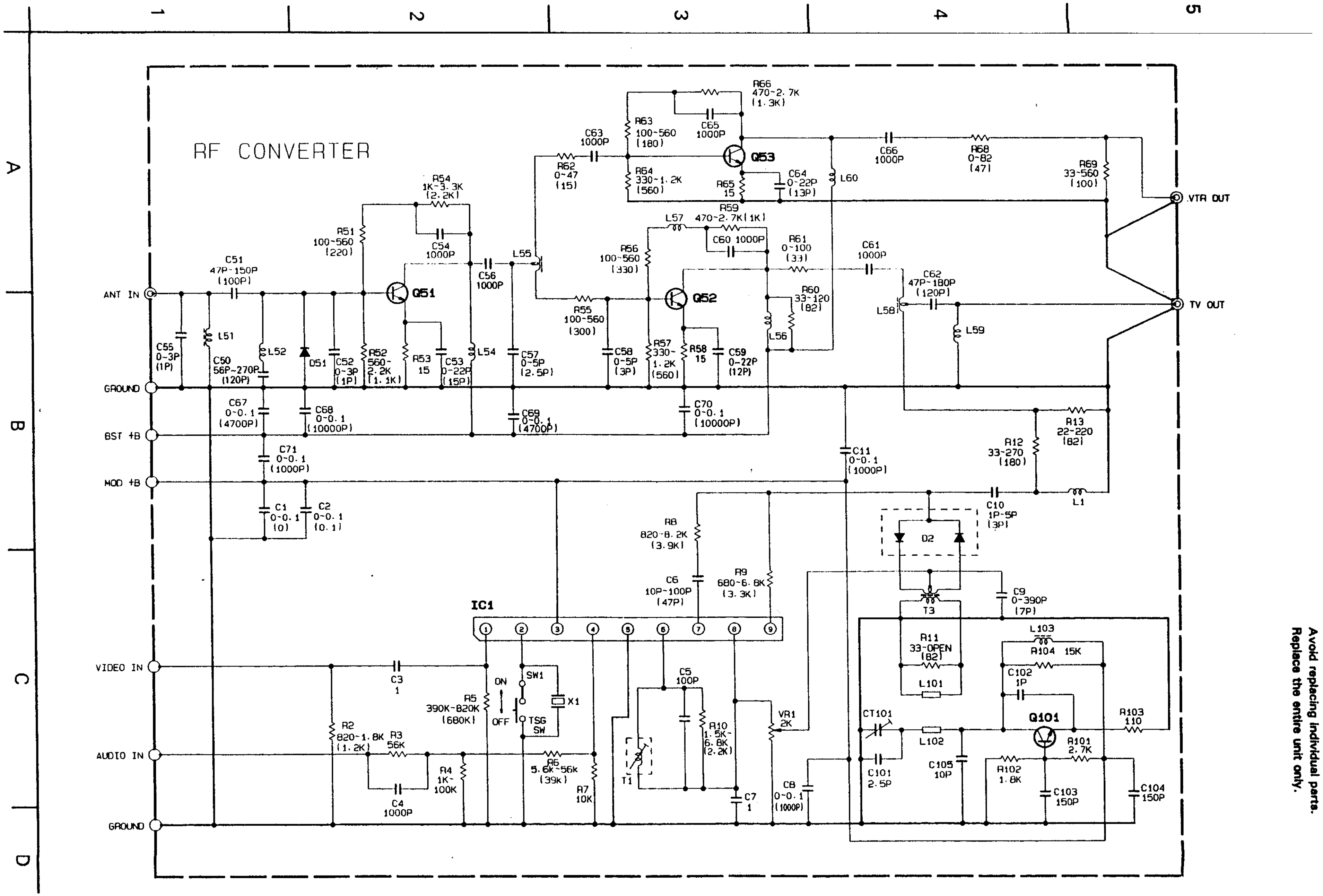
Key No.	FUNCTION NAME
1	TV/VIDEO/AUX
2	OPERATE
3	DISPLAY
4	1
5	2
6	6
7	3
8	5
9	SELECT/C.MEMO.
10	TRANS
11	TIMER
12	PLAY
13	REW
14	REC
15	FF
16	STOP
17	4
18	7/VPS
19	8/DAILY
20	CANCEL/C.RESET
21	0/AUX
22	REVIEW
23	9/WEEKLY
24	PROG./CLOCK/CH
25	PAUSE
26	TV PROG +
27	TV PROG –
28	VOL –
29	A.MONITOR/MUTE
30	SP/LP – /– –
31	VOL +
32	OSD
33	SEARCH << +10
34	SEARCH >> +20

– for HR-S6900EG –


REMOTE CONTROL
LCD
IC1
IC2
Q1
Q2
Q3
Q5
X1 2.42MHz
X2 32.768kHz
X3 400kHz
JOG/SHUTTLE
VTR
SW1
SW2
TV
LED1 LN66
LED3 LN1261
LED4~LED12 LM1261×9
R21~R29 1kΩ×9
3V
JP1
JP2
JP3
JP4
JP5
JP8

No.	Key Name
1	TV/VIDEO
2	OPERATE
3	DISPLAY
4	1
5	2
6	6
7	3
8	5
9	SELECT/C. MEMO
10	TRANS/CH SEARCH
11	TIMER
12	PLAY
13	REW
14	REC
15	FF
16	STOP
17	4
18	7/VPS
19	8/DAILY
20	CANCEL/C. RESET
21	0/AUX
22	REVIEW
23	9/WEEKLY
24	PROG./CLOCK/CH
25	PAUSE
26	TV PROG. (+)
27	TV PROG. (–)
28	VOL. (–)
29	A.MONITOR
30	SP/LP
31	VOL. (+)
32	OSD
33	SEARCH <<
34	SEARCH >>
35	LIGHT
36	***
37	***
38	***
39	ADD TIME
40	***
41	JOG/SHUTTLE
14+12	REC START
14+25	REC PAUSE

4-30 RF CONVERTER SCHEMATIC DIAGRAM



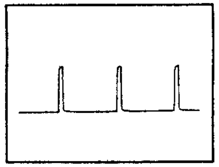
1
2
3
4
5
A
B
C
D
RF CONVERTER
ANT IN
GROUND
BST +B
MOD +B
VIDEO IN
AUDIO IN
GROUND
VTR OUT
TV OUT
Q51
Q52
Q53
Q101
IC1
D51
D2
T1
T3
X1
SW1
TSG SW
ON
OFF
VR1 2K
C51 47P-150P (100P)
C55 0-3P (1P)
L51
C50 56P~270P (120P)
L52
C52 0-3P (1P)
R51 100-560 (220)
R52 560-2.2K (1.1K)
R53 15
C53 0-22P (15P)
R54 1K-3.3K (2.2K)
C54 1000P
L54
C56 1000P
L55
C57 0-5P (2.5P)
R62 0-47 (15)
C63 1000P
R63 100-560 (180)
R64 330-1.2K (560)
R65 15
C64 0-22P (13P)
C65 1000P
R66 470-2.7K (1.3K)
L60
C66 1000P
R68 0-82 (47)
R69 33-560 (100)
R55 100-560 (300)
C58 0-5P (3P)
R56 100-560 (330)
R57 330-1.2K (560)
R58 15
C59 0-22P (12P)
L57
R59 470-2.7K (1K)
C60 1000P
R61 0-100 (33)
R60 33-120 (82)
L56
C61 1000P
C62 47P-180P (120P)
L58
L59
C67 0-0.1 (4700P)
C68 0-0.1 (10000P)
C69 0-0.1 (4700P)
C70 0-0.1 (10000P)
C71 0-0.1 (1000P)
C1 0-0.1 (0)
C2 0-0.1 (0.1)
C11 0-0.1 (1000P)
R13 22-220 (82)
R12 33-270 (180)
C10 1P-5P (3P)
L1
R8 820-8.2K (3.9K)
C6 10P-100P (47P)
R9 680-6.8K (3.3K)
C9 0-390P (7P)
R11 33-OPEN (82)
L101
L103
R104 15K
C102 1P
CT101
L102
C101 2.5P
C105 10P
R102 1.8K
C103 150P
R101 2.7K
C104 150P
R103 110
C3 1
R5 390K-820K (680K)
R2 820-1.8K (1.2K)
R3 56K
C4 1000P
R4 1K-100K
R6 5.6K-56K (39K)
R7 10K
C5 100P
R10 1.5K-6.8K (2.2K)
C7 1
C8 0-0.1 (1000P)

Notes:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference. Avoid replacing individual parts. Replace the entire unit only.

4.31 WAVEFORMS

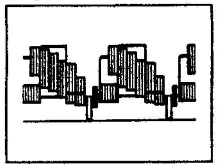
—VIDEO—

WF1 TP212 C.SYNC



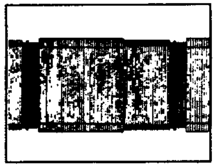
REC 4.8 Vp-p
0.2 V/20 μsec/DIV

WF2 CN202-25



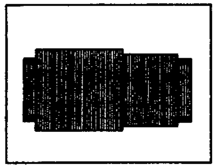
REC 1.0 Vp-p
50 mV/20 μsec/DIV

WF3 TP204 CARR/DEV



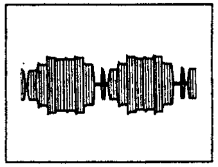
REC 0.6 Vp-p
20 mV/5 msec/DIV

WF4 PB COLOR



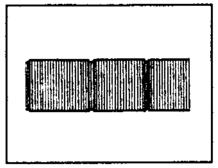
PB 0.35 Vp-p
10 mV/5 msec/DIV

WF5 REC COLOR



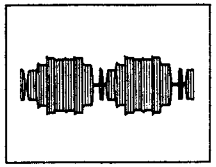
REC 0.64 Vp-p
20 mV/20 μsec/DIV

WF6 PB FM



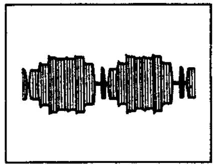
PB 0.35 Vp-p
10 mV/5 msec/DIV

WF7 CN203-12



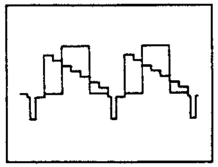
PB 1.0 Vp-p
50 mV/20 μsec/DIV

WF8 CN203-22



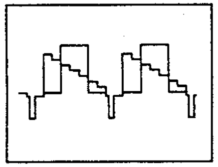
REC 0.6 Vp-p
PB 0.9 Vp-p
20 mV/20 μsec/DIV

WF9 TP226 SUB EMPH.



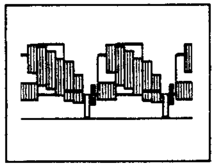
REC/PB 0.44 Vp-p
20 mV/20 μsec/DIV

WF10 TP223 Y. SEP



REC/PB 1.0 Vp-p
50 mV/20 μsec/DIV

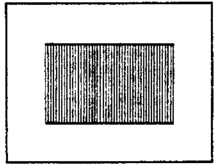
WF11 TP251 Y/V



REC/PB 1.0 Vp-p
50 mV/20 μsec/DIV

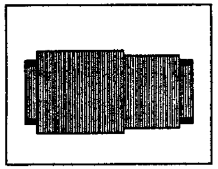
—AUDIO—

WF1 REC FM



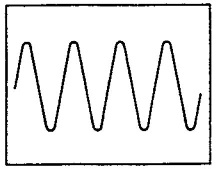
REC 0.68 vp-p
20 mV/5 msec/DIV

WF2 AUDIO PB FM



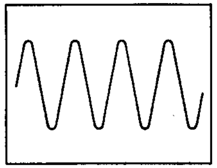
PB 0.64 Vp-p
20 mV/10 msec/DIV

WF3 TP33 A. ERASE



REC 43.0 Vp-p
1 V/10 μsec/DIV

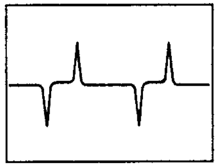
WF4 TP34 F. ERASE



REC 45.0 Vp-p
1 V/10 μsec/DIV

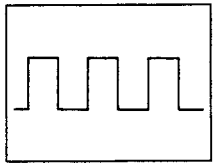
—SERVO—

WF1 TP401 CTL PULSE



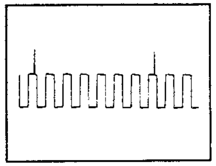
PB 2.8 Vp-p
0.1 V/10 msec/DIV

WF2 TP411 D. FF



REC/PB 5.0 Vp-p
0.5 V/10 msec/DIV

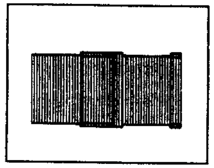
WF3 D. PG/FG



REC/PB 4.2 Vp-p
0.1 V/10 msec/DIV

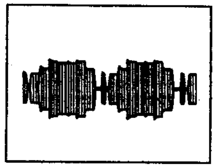
—PRE/REC—

WF1 REC FM



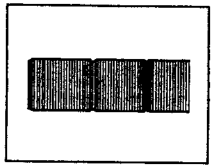
REC 0.25 Vp-p
10 mV/5 msec/DIV

WF2 REC COLOR



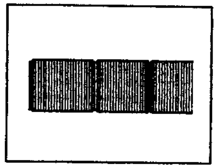
REC 0.32 Vp-p
10 mV/20 μsec/DIV

WF3 PB COLOR



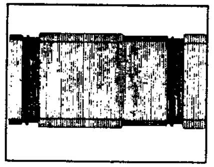
PB 0.36 Vp-p
10 mV/5 msec/DIV

WF4 PB FM



PB 0.36 Vp-p
10 mV/5 msec/DIV

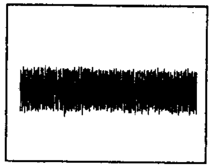
WF5 CN2-9



REC 3.2 Vp-p
0.1 Vp-p/5 msec/DIV

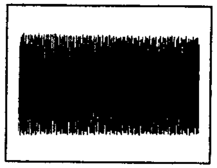
—FMA PRE/REC—

WF1 TP253 AUDIO PB FM



PB 0.05 Vp-p
5 mV/10 μsec/DIV

WF2 IC201-4



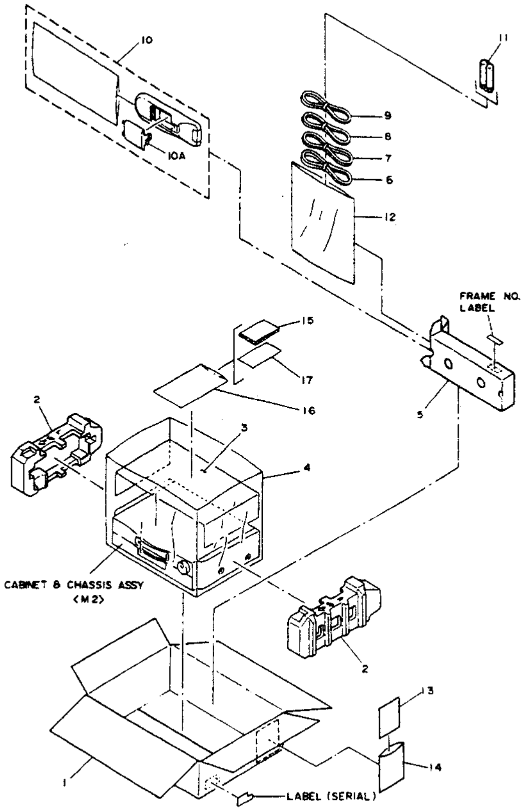
REC 0.8 Vp-p
20 mV/10 μsec/DIV

SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

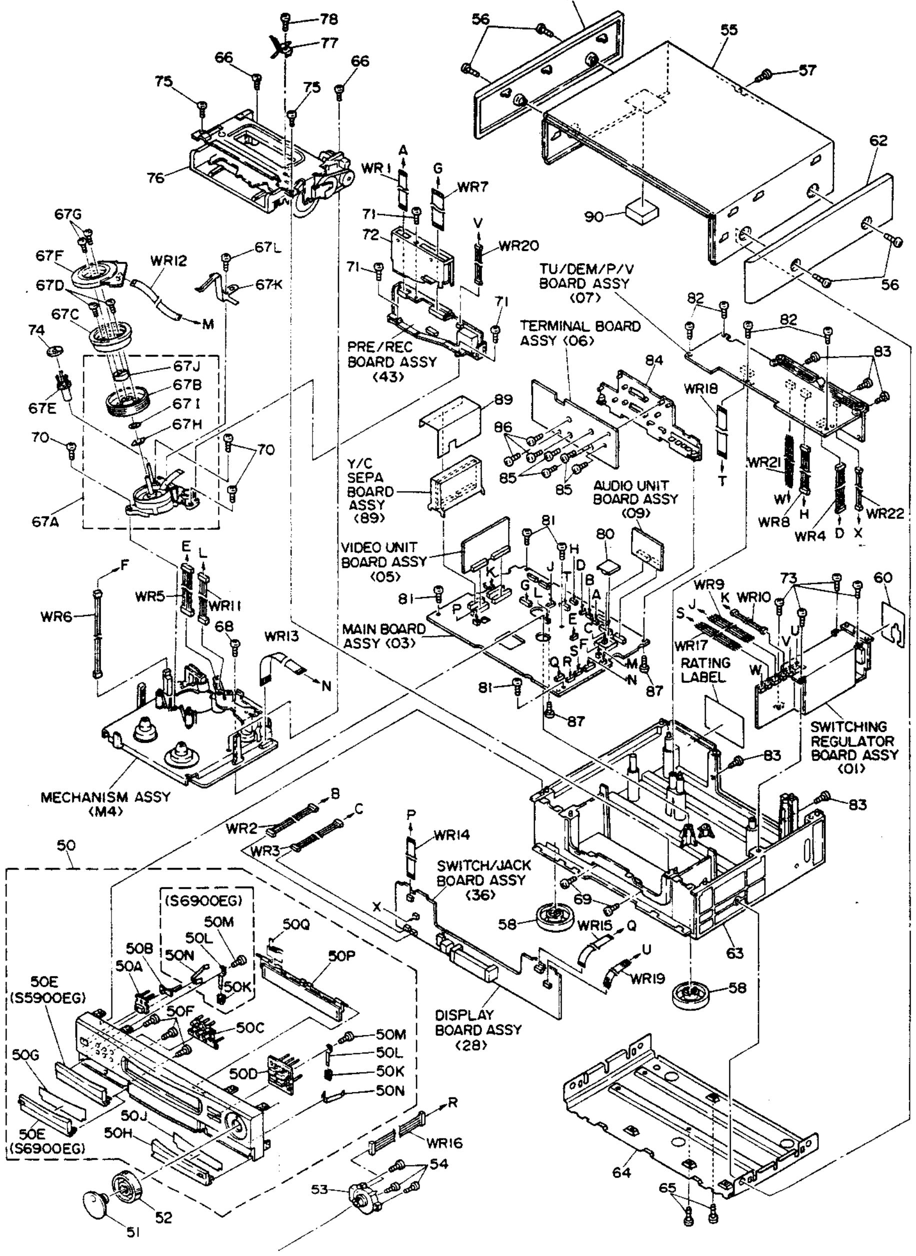


#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
********************************			
			PACKING AND ACCESSORY ASSEMBLY <M1>
	1	PQ34865-2	PACKING CASE,HR-S6900EG
		PQ34774-2-1	PACKING CASE,HR-S5900EG
	2	PQ34700A-2	CUSHION ASSEMBLY,HR-S6900EG
		PQ34743A-2	CUSHION ASSEMBLY,HR-S5900EG
	3	PQ34189-8	SHEET,HR-S6900EG
		PQ41026-33	PROTECT SHEET,HR-S5900EG
	4	PQM30021-82	POLY BAG
	5	PQ34715	CASE,ACCESSORY
⚠	6	QMP40E0-183	POWER CORD
⚠	7	PEAC0300	RF CABLE,HR-S5900EG
	8	PU56142-5	PIN CORD ASSY
	9	PU60111	S CABLE
⚠	10	PQ11525J	REMOTE CONTROLLER,HR-S6900EG
⚠		PQ11534E-7	REMOTE CONTROLLER,HR-S5900EG
	10A	PQ46034	CAP(BATTERY),HR-S6900EG
		PQ46063	CAP(BATTERY),HR-S5900EG
	11	R6PRPA-2ST	BATTERY,X2
	12	QPGA020-02005	POLY BAG
	13	BT-20135	WARRANTY CARD
	14	PQ33909	POLY BAG
⚠	15	PU30425-1440	INSTRUCTIONS,HR-S5900EG
⚠		PU30425-1459	INSTRUCTIONS,HR-S6900EG
	16	QPGA025-03505	POLY BAG
	17	PQ34978-7	SHEET(S.V.)

5.2 CABINET AND CHASSIS ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.



78
77
61
56
66
75
55
57
76
62
67G
67F
WR12
67L
67K
67D
M
67C
74
67J
67B
67I
67H
67E
70
67A
WR1
A
G
WR7
71
72
V
WR20
90
TU/DEM/P/V BOARD ASSY (07)
82
83
84
TERMINAL BOARD ASSY (06)
PRE/REC BOARD ASSY (43)
89
86
85
Y/C SEPA BOARD ASSY (89)
AUDIO UNIT BOARD ASSY (09)
WR18
WR21
T
W
WR8
H
WR4
D
X
WR22
81
80
VIDEO UNIT BOARD ASSY (05)
MAIN BOARD ASSY (03)
E
L
F
WR5
WR11
WR6
68
WR13
N
87
WR9
K
WR10
S
J
73
60
WR17
RATING LABEL
U
SWITCHING REGULATOR BOARD ASSY (01)
MECHANISM ASSY (M4)
B
C
WR2
WR3
P
WR14
SWITCH/JACK BOARD ASSY (36)
50
(S6900EG)
50M
50L
50N
50B
50A
50Q
50P
50K
50E (S5900EG)
50F
50C
50G
50D
50J
50H
50E (S6900EG)
X
58
69
WR15
Q
WR19
63
DISPLAY BOARD ASSY (28)
R
WR16
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#△	REF No.	PART No.	PART NAME, DESCRIPTION
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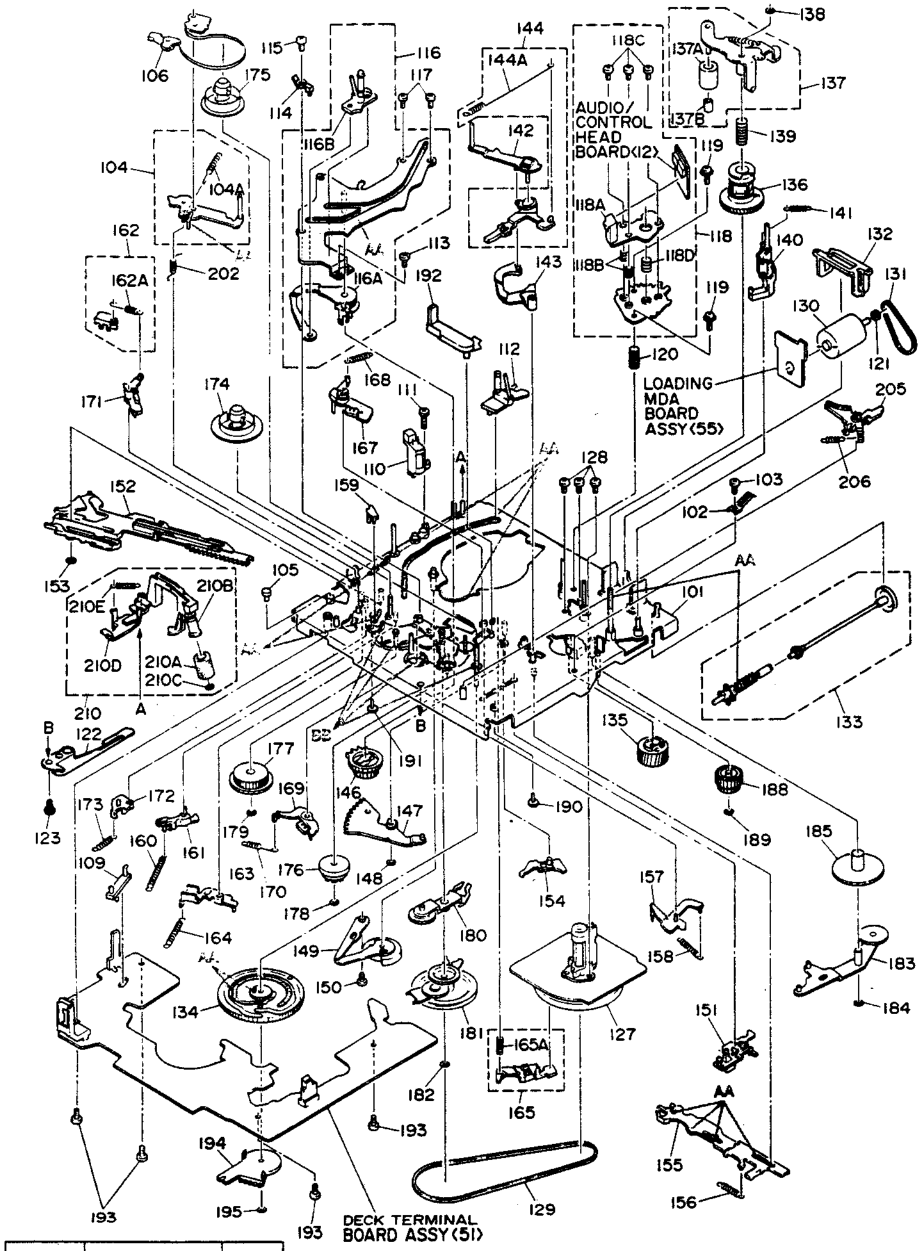
			CABINET AND CHASSIS ASSEMBLY <M2>
△	50	PQ11531X-22	FRONT PANEL ASSY,HR-S5900EG
△		PQ11531Z-22	FRONT PANEL ASSY,HR-S6900EG
	50A	PQ34725-8	BUTTON(POWER),HR-S5900EG
		PQ34725-9	BUTTON(POWER),HR-S6900EG
	50B	PQ46050	INDICATOR
	50C	PQ21549-2	BUTTON(1),HR-S6900EG
		PQ21549-4	BUTTON(1),HR-S5900EG
	50D	PQ21559-7	BUTTON(OPE),HR-S5900EG
		PQ21559-8	BUTTON(OPE),HR-S6900EG
	50E	PQ21584-4	COVER,HR-S5900EG
		PQ21547-19-7	DOOR(L),HR-S6900EG
	50F	SDSF2008Z	SCREW,X3 HR-S5900EG
	50G	PQ34734-7	PLATE(DOOR L),HR-S6900EG
	50H	PQ21548-16	DOOR(R),HR-S6900EG
		PQ21548-14-8	DOOR(R),HR-S5900EG
	50J	PQ34735-4	PLATE(DOOR R),HR-S6900EG
		PQ34735-9	PLATE(DOOR R),HR-S5900EG
	50K	PQ46167	SPRING(2),X2 S6900EG X1 S5900EG
	50L	PQ46166-1-2	SPRING(1),X2 S6900EG X1 S5900EG
	50M	SDSF2005Z	SCREW,X2 S6900EG X1 S5900EG
	50N	PQ34736	EARTH PLATE,X2 S6900EG X1 S5900EG
	50P	PQ21560	CASSETTE HOUSING DOOR,HR-S6900EG
		PQ21560-11	CASSETTE HOUSING DOOR,HR-S5900EG
	50Q	PQ45704	TORSION SPRING
	51	PQ34858F-3	KNOB(JOG) ASSEMBLY,HR-S5900EG
		PQ35050A	KNOB(JOG) ASSEMBLY,HR-S6900EG
	52	PQ34698-2-5	KNOB(SHUTTLE),HR-S6900EG
		PQ34698-6-5	KNOB(SHUTTLE),HR-S5900EG
	53	PEME0757-03	JOG SHUTTLE ASSEMBLY
	54	SDSF2608Z	SCREW,X3 SHUTTLE
△	55	PQ11487-4-4	TOP COVER,HR-S6900EG
△		PQ11487-5	TOP COVER,HR-S5900EG
	56	PQ43827	SPECIAL SCREW,X4 TOP COVER S5900EG
		PQ46254	SPECIAL SCREW,X4 TOP COVER S6900EG
	57	SDSF3010M	SCREW,TOP COVER
	58	PQ45976C	FOOT ASSEMBLY,X2 HR-S6900EG
		PQ45976A-2	FOOT ASSEMBLY,X2 HR-S5900EG
△	60	PQ34613-4	SHEET(BRACKET),HR-S5900EG
△		PQ34613-5	SHEET(BRACKET),HR-S6900EG
	61	PQ11516-2-5	SIDE PANEL(L),HR-S6900EG
	62	PQ11517-2-5	SIDE PANEL(R),HR-S6900EG
△	63	PQ11479-1-7	BOTTOM CHASSIS
△	64	PQ11488-2	BOTTOM COVER
	65	SDSF3010Z	SCREW,X2 BOTTOM COVER
	66	SDST2610Z	SCREW,X2 CASSETTE HOUSING
	67A	PDM2247F	DRUM SUB ASSEMBLY
	67B	PDM3353X	UPPER DRUM ASSEMBLY
	67C	PDZ0136	ROTOR ASSEMBLY
	67D	SPSH2660Z	SCREW,X2
	67E	PDM4300A-3	I.D.ROLLER ASSY
△	67F	PDZ0119-5	STATOR ASSEMBLY
	67G	SPSP2606Z	SCREW,X2
	67H	PDM4343A	BRUSH ASSEMBLY
	67I	PDM4050-9	WASHER
	67J	PDM4345A	COLLAR ASSEMBLY
	67K	PDM3372	EARTH PLATE
	67L	SPSG2606Z	SCREW
	68	PQ43831	SPECIAL SCREW,MECHA ASSY
	69	SDST4010Z	SCREW,X2 MECHA ASSY
	70	SDST2612Z	SCREW,X3 DRUM
	71	SDSG2606Z	SCREW,X3 PRE/REC
	72	PQ33877-1-1	SHIELD CASE(2),PRE/REC
	73	SDSF3010Z	SCREW,X4 SW REG
	74	PQ45339-2-3	INERTIA PLATE,SUPPLY
	75	SDSF3008Z	SCREW,X2 CASSETTE HOUSING
	76	PUS29662A-5	CASSETTE HOUSING ASSEMBLY
	77	PQ46083	EARTH PLATE,CASSETTE HOUSING
	78	SPST2604Z	SCREW,EARTH PLATE
	80	PU59961	P/R AMP SHIELD2,HR-S6900EG
	81	SDSF3010Z	SCREW,X4 MAIN
	82	SDSF3010Z	SCREW,X4 TUNER
	83	SDSF3010M	SCREW,X5 TERMINAL
△	84	PQ11595	TERM. BOARD (1),HR-S5900EG
△		PQ11595-3	TERM. BOARD (1),HR-S6900EG
	85	SDSF3010Z	SCREW,X4 PERI
	86	SDSF3010Z	SCREW,X3 TERMINAL BOARD
	87	SDSF3010Z	SCREW,X2 MAIN
	89	PQ35098	COVER(SHIELD)
	90	PQM30029-220	SPACER
	WR1	PW30802-0928	FFC WIRE,CN1
	WR2	PW30504-03W5801	WIRE,CN4 HR-S6900EG
	WR3	PW30504-03W6606	WIRE,CN5 HR-S6900EG
	WR4	PW30504-05W3010	WIRE,CN6
	WR5	PW30504-04W2007	WIRE,CN101
	WR6	PW30504-02W5801	WIRE,CN102
	WR7	PW30802-1620	FFC WIRE,CN201
	WR8	PW30504-06W2210	WIRE,CN208
	WR9	PW30603-07750	WIRE,CN209
	WR10	PW30349-0226009	WIRE,CN213
	WR11	PW30504-03W2801	WIRE,CN401
	WR12	PW30803-0438	FFC WIRE,CN402
	WR13	PW30802-1626	FFC WIRE,CN601
	WR14	PW30803-0426	FFC WIRE,CN602
	WR15	PW30802-0826	FFC WIRE,CN603
	WR16	PW30218-0833014	WIRE,CN604
	WR17	PW30603-05D20	RIBBON WIRE ASSY,CN605
	WR18	PW30802-1422	RIBBON JUMPER,CN606
	WR19	PW30603-04932	WIRE,REG CN1
	WR20	PW30218-0335213	WIRE,REG CN2
	WR21	PW30604-04450	WIRE,REG CN4
	WR22	PW30375-0227210	WIRE,TU CN5 HR-S6900EG

5.3 MECHANISM ASSEMBLY <M4>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116B
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162A
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116A
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144A
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118C
AUDIO/
CONTROL
HEAD
BOARD<12>
118A
118B
118D
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137A
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LOADING
MDA
BOARD
ASSY<55>
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DECK TERMINAL
BOARD ASSY<51>

Category	Part number	MARK
Grease	KANTO-G-31KAV	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

MECHANISM ASSEMBLY <M4>

#	△	REF No.	PART No.	PART NAME, DESCRIPTION
		101	PQ11473B-6	MAIN DECK ASSY
		102	PQ43849	EARTH PLATE
		103	SPST2604Z	SCREW
		104	PQ45887A-4	TENSION ARM ASSY
		104A	PQ45373-1-4	TENSION SPRING
		105	PQ45374-1-2	ADJUST PIN
		106	PQ34629A	TENSION BAND ASSEMBLY
		109	PQ34631	SPRING BASE
		110	PEHE0287	FULL ERASE HEAD
		111	SDSF2614Z	SCREW,FE HEAD
		112	PQ34749C-7	POLE BASE ASSY(SUPPLY)
		113	SDST2608Z	SCREW
		114	PQ45444	STOPPER
		115	SPSF2006Z	SCREW
		116	PQ34619A-4	LOADING ASSY(TAKE UP)
		116A	PQ45286D-4	SPRING STAY ASSY
		116B	PQ34756A-1	POLE BASE ASSY(TAKE UP)
		117	SDSF2608Z	SCREW,X2
		118	PQ45355C	AUDIO CONTROL HEAD ARM ASSY
		118A	PEHE0262	AUDIO CONTROL HEAD.
		118B	PQM30002-192	COMPRESSION SPRING,X2
		118C	PQ43687A	SPECIAL SCREW,X3
		118D	PQM30002-211	COMPRESSION SPRING
		119	SPSF2608M	SCREW,X2
		120	PQM30002-216	COMPRESSION SPRING
		121	PQ43546-1-2.	MOTOR PULLEY
		122	PQ46099	CAPSTAN BRACKET
		123	SDST2606Z	SCREW
	△	127	PU61313	CAPSTAN MOTOR
		128	SPSG2608Z	SCREW,X3
		129	PQM30003-27	BELT(CAPSTAN MOTOR)
	△	130	PU60628-2	LOADING MOTOR
		131	PQM30003-28-14	BELT(MODE MOTOR)
		132	PQ34025-1-2	MOTOR HOLDER
		133	PQ45917A-1	WORM CLUTCH ASSEMBLY
		134	PQ11649	CONTROL CAM
		135	PQ34986	RELAY CAM
		136	PQ21481	PINCH ROLLER CAM
		137	PQ45921E	PINCH ROLLER ARM ASSY
		137A	PQ42007C-2	PINCH ROLLER ASSY
		137B	PQ43566	PINCH ROLLER CAP
		138	PQM30017-12	SLIT WASHER
		139	PQM30002-226	COMPRESSION SPRING
		140	PQ34564	PINCH ROLLER LEVER
		141	PQM30001-371-92	TENSION SPRING
		142	PQ45924C	GUIDE ARM ASSY
		143	PQ34566-1-2	ARM LEVER
		144	PQ45925B	SUB BRAKE ASSY(TAKE UP)
		144A	PQ46269	T.SPRING(SBT)
		146	PQ34033	LOADING GEAR(TAKE UP)
		147	PQ46217A-1	ARM GEAR
		148	PQM30017-30	SLIT WASHER
		149	PQ45298C	LOADING GEAR ASSY(SUPPLY)
		150	PQ45913	SPECIAL SCREW
		151	PQ45399A-3	SLIDING BASE ASSY
		152	PQ11469-1-5	CONTROL PLATE
		153	PQM30017-45	SLIT WASHER
		154	PQ45402	RESET LEVER
		155	PQ21482-1-4	SLIDE PLATE
		156	PQM30001-377	TENSION SPRING
		157	PQ34569-1-3	IDLER CANCEL LEVER
		158	PQM30001-381	TENSION SPRING
		159	PQ34570-1-2	TAKE UP HEAD
		160	PQ46024-1-2	TENSION SPRING
		161	PQ34571-1-2	TAKE UP LEVER
		162	PQ45929A-3	SLIDER ASSY
		162A	PQ46003-1-5	TENSION SPRING
		163	PQ34572	REVERSE TENSION LEVER
		164	PQM30001-343-78	TENSION SPRING
		165	PQ45930A-5	CAPSTAN BRAKE ASSY
		165A	PQM30001-378	TENSION SPRING
		167	PQ45932A-3	MAIN BRAKE ASSY(TAKE UP)
		168	PQM30001-357	TENSION SPRING
		169	PQ45933A-1	MAIN BRAKE ASSY(SUPPLY)
		170	PQM30001-374	TENSION SPRING
		171	PQ34574	SUB BRAKE(SUPPLY)
		172	PQ45934-1-1	OFF LEVER
		173	PQM30001-383	TENSION SPRING
		174	PQ45935B-3	REEL DISK ASSY(TAKE UP)
		175	PQ45524A-4	REEL DISK ASSY(SUPPLY)
		176	PU61388-2	CLUTCH GEAR UNIT(TAKE UP)
		177	PU61389-1-3	CLUTCH GEAR UNIT(SUPPLY)
		178	PQM30017-7	SLIT WASHER
		179	PQM30017-7	SLIT WASHER
		180	PU61390	IDLER UNIT (D)
		181	PU61317-1-4	CENTER GEAR UNIT
		182	PQM30017-30	SLIT WASHER
		183	PQ45943A-4	DRIVE ARM ASSY
		184	PQM30017-47	SLIT WASHER
		185	PQ45945	RELAY GEAR
		188	PQ45434	CASSETTE HOUSING GEAR
		189	PQM30017-47	SLIT WASHER
		190	PQ45439	S SWITCH PIN (S CASSETTE DET)
		191	PQ45981	C.SWITCH PIN
		192	PQ21488	LED GUIDE
		193	SDSF2608Z	SCREW,X4
		194	PU61322-1-2	ROTARY ENCODER
		195	PQM30017-40	SLIT WASHER
		202	PQ45768-1-3	TORSION SPRING (TENSION ARM)
		205	PQ46264A	SUB BRAKE ASSY(TAKE UP 2)
		206	PQM30001-376	TENSION SPRING
		210	PQ45561A-2	CLEANER ASSEMBLY
		210A	PQ44837-2	CLEANER
		210B	PQ45689	ROLLER
		210C	PQM30017-38	SLIT WASHER
		210D	PQ34047-1-2	LIMITTER LEVER
		210E	PQM30001-323	TENSION SPRING

5.4 ELECTRICAL PARTS LIST

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SWITCHING REGULATOR BOARD ASSEMBLY <01>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB20636A	SWITCH REGULATOR BOARD ASSY	
	IC1	FA5311P	IC	
	IC2	BA10324A	IC	
		or LM324N	IC	
	IC3	XRA10358	IC	
		or BA10358	IC	
		or LMT358N	IC	
	IC4	XRA10358	IC	
		or BA10358	IC	
		or LMT358N	IC	
	Q1	2SK1459-CB14	FE TRANSISTOR	
	Q3	2SA933S	TRANSISTOR	
		or 2SA1267(YG)-TJK	TRANSISTOR	
	Q4	2SD1913(RS)	TRANSISTOR	
	Q5	2SD1913(RS)	TRANSISTOR	
		or 2SD2375(QP)	TRANSISTOR	
	Q6	2SD1913(RS)	TRANSISTOR	
		or 2SD2375(QP)	TRANSISTOR	
	Q7	DTA114ES	TRANSISTOR	
	Q8	2SD1913(RS)	TRANSISTOR	
		or 2SD2375(QP)	TRANSISTOR	
	D1	10E6-F2	DIODE	
	D2	10E6-F2	DIODE	
	D3	10E6-F2	DIODE	
	D4	10E6-F2	DIODE	
	D5	AG01	FR DIODE	
	D6	AG01	FR DIODE	
	D7	1SR153-200-T2	FR DIODE	
	D8	RD20ES-T1B1	ZENER DIODE	
	D9	1SS133	DIODE	
	D10	MTZV5.1C	ZENER DIODE	
	D11	AU01Z	FR DIODE	
	D12	1SR153-200-T2	FR DIODE	
	D13	AU01Z	FR DIODE	
	D14	MA644	FR DIODE	
	D15	FMB-24	BARRIER DIODE	
	D16	1SR153-200-T2	FR DIODE	
	D17	RD6.2ES-T1B1	ZENER DIODE	
	D18	1SS133	DIODE	
	D19	1SS133	DIODE	
	D20	1SS133	DIODE	
	D21	1SS133	DIODE	
	D22	MTZ30AT-77	ZENER DIODE	
	D23	RD5.1ES-T1B3	ZENER DIODE	
	D24	11ES2	DIODE	
	D25	RD10ES-T1B1	ZENER DIODE	
	D26	1SS133	DIODE	
	D27	1SS133	DIODE	
	D32	RD5.1ES-T1B3	ZENER DIODE	
	D35	AU01Z	FR DIODE	
	D36	1SS133	DIODE	
	D37	MTZ33DT-77	ZENER DIODE	
	D38	MTZ33DT-77	ZENER DIODE	
	D39	RD4.7ES-T1B1	ZENER DIODE	
	R3	QRD161J-184	RESISTOR	180kΩ,1/6W
	R4	QRD161J-184	RESISTOR	180kΩ,1/6W
	R5	QRD161J-104	RESISTOR	100kΩ,1/6W
	R6	QRG029J-473G	OMF RESISTOR	47kΩ,2W
	R7	QRG029J-473G	OMF RESISTOR	47kΩ,2W
	R8	QRG01DJ-220X	OMF RESISTOR	22Ω,1W
	R9	QRX014J-R22Z	MF RESISTOR	0.22Ω,1W
	R10	QRD161J-102	RESISTOR	1kΩ,1/6W
	R11	QRD161J-221	RESISTOR	220Ω,1/6W
	R12	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R13	QRD161J-682	RESISTOR	6.8kΩ,1/6W
⚠	R15	QRZ0077-4R7X	FUSIBLE RESISTOR	4.7Ω,1/4W
	R16	QRG02DJ-222X	OMF RESISTOR	2.2kΩ,2W
⚠	R17	QRZ0077-101X	FUSIBLE RESISTOR	100Ω,1/4W
	R18	QRD161J-222	RESISTOR	2.2kΩ,1/6W
	R19	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R20	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R21	QRD161J-332	RESISTOR	3.3kΩ,1/6W
	R22	QRD161J-393	RESISTOR	39kΩ,1/6W
	R23	QRD161J-681	RESISTOR	680Ω,1/6W
	R24	QRD161J-124	RESISTOR	120kΩ,1/6W
	R25	QRD161J-103	RESISTOR	10kΩ,1/6W
	R26	QRD161J-102	RESISTOR	1kΩ,1/6W
	R27	QRD161J-473	RESISTOR	47kΩ,1/6W
	R28	QRD161J-102	RESISTOR	1kΩ,1/6W
	R29	QRD161J-103	RESISTOR	10kΩ,1/6W
	R30	QRD161J-103	RESISTOR	10kΩ,1/6W
	R31	QRD161J-103	RESISTOR	10kΩ,1/6W
	R33	QRD161J-753	RESISTOR	75kΩ,1/6W
	R34	QVPA606-332Z	V RESISTOR,SWD 5V	
	R35	QRD161J-682	RESISTOR	6.8kΩ,1/6W
	R36	QRV144F-8451AY	CMF RESISTOR	8.45kΩ,1/4W
	R37	QRV144F-1022AY	CMF RESISTOR	10.2kΩ,1/4W
	R39	QRD161J-103	RESISTOR	10kΩ,1/6W
	R40	QRD161J-102	RESISTOR	1kΩ,1/6W
	R43	QRV144F-8451AY	CMF RESISTOR	8.45kΩ,1/4W
	R44	QRV144F-9761AY	CMF RESISTOR	9.76kΩ,1/4W
	R45	QRD161J-102	RESISTOR	1kΩ,1/6W
	R46	QRD161J-222	RESISTOR	2.2kΩ,1/6W
	R47	QRV144F-3011AY	RESISTOR	3.01kΩ,1/4W
	R48	QRV144F-1001A	CMF RESISTOR	1kΩ,1/4W
	R49	QRD161J-221	RESISTOR	220Ω,1/6W
	R51	QRD161J-103	RESISTOR	10kΩ,1/6W
	R52	QRD161J-103	RESISTOR	10kΩ,1/6W
	R55	QRD161J-102	RESISTOR	1kΩ,1/6W
	R56	QRD161J-222	RESISTOR	2.2kΩ,1/6W
	R57	QRD161J-103	RESISTOR	10kΩ,1/6W
	R58	QRD161J-681	RESISTOR	680Ω,1/6W
⚠	C1	QCZ9016-103M	CAPACITOR	0.01μF
⚠	C2	QFZ9022-683	F CAPACITOR	0.068μF
⚠	C3	QFZ9037-333	F CAPACITOR	0.033μF
⚠	C6	QCZ9026-471	CAPACITOR	470pF
⚠	C7	QCZ9026-222	CAPACITOR	0.0022μF
⚠	C8	QCZ9026-221	CAPACITOR	220μF
	C9	QCZ0212-472	CAPACITOR	0.0047μF,1kV
	C11	QEGC1EM-336	E CAPACITOR	33μF,25V
	C12	PECA0738-107	E CAPACITOR	
	C14	QFLA1HJ-471Z	F CAPACITOR	470pF,50V
	C15	QFV11HJ-104AZ	F CAPACITOR	0.1μF,50V
	C16	QFV11HJ-683AZ	F CAPACITOR	0.068μF,50V
	C17	QFLA1HJ-472Z	F CAPACITOR	0.0047μF,50V
	C18	QETC1HM-474	E CAPACITOR	0.47μF,50V
	C20	QETC1CM-107	E CAPACITOR	100μF,16V
	C21	QEGB1AM-107	E CAPACITOR	100μF,10V
	C22	QETC1JM-226	E CAPACITOR	22μF,63V
	C23	QEGB1EM-227	E CAPACITOR	220μF,25V
	C24	QEGB1CM-687	E CAPACITOR	680μF,16V
	C25	QEGB1AM-128	E CAPACITOR	1200μF,10V
	C26	QETC1VM-336	E CAPACITOR	33μF,35V
	C27	QFV11HJ-104AZ	F CAPACITOR	0.1μF,50V
	C28	QFLA1HJ-103Z	F CAPACITOR	0.01μF,50V
	C29	QFV11HJ-683AZ	F CAPACITOR	0.068μF,50V
	C30	QFV11HJ-104AZ	F CAPACITOR	0.1μF,50V
	C31	QETC1EM-227	E CAPACITOR	220μF,25V
	C32	QETB1CM-108	E CAPACITOR	1000μF,16V
	C33	QETB1AM-108	E CAPACITOR	1000μF,10V
	C34	QETC1VM-336	E CAPACITOR	33μF,35V
	C35	QETC1CM-107	E CAPACITOR	100μF,16V
	C36	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C37	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C38	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C39	QCZ0136-101Z	CAPACITOR	100pF,1kV
	C40	QFV11HJ-474AZ	F CAPACITOR	0.47μF,50V
	C42	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C43	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C44	QETC1EM-476	E CAPACITOR	47μF,25V
	C45	QETC1CM-106	E CAPACITOR	10μF,16V
	C46	QETC1EM-226	E CAPACITOR	22μF,25V
	C47	QETC1CM-106	E CAPACITOR	10μF,16V
	C48	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C50	QEGB1AM-107	E CAPACITOR	100μF,10V
	C52	QCZ0136-101Z	CAPACITOR	100pF,1kV
	L1	PELN0696-330KZ	COIL	33μH
	L2	PELN0696-330KZ	COIL	33μH
	L3	PU60944-330K	COIL	33μH
	L4	PU59152-100J	COIL	10μH
	K1	PELN0662-Z	FERRATE BEADS	
	K2	PELN0662-Z	FERRATE BEADS	
	K4	PELN0662-Z	FERRATE BEADS	
⚠	PC1	PC120FY9	PH COUPLER	
⚠	T1	PELN0986	SW TRANS	
⚠	BKT1	PQ46004	BRACKET,REG	
	ETH1	PQ44695	EARTH PLATE	
	ETH2	PQ46081-1-1	EARTH PLATE	
⚠	FC1	PEMC0965-Z	FUSE CLIP	
⚠	FC2	PEMC0965-Z	FUSE CLIP	
⚠	LF1	PELN0255	LINE FILTER	
⚠	LF2	PU61108	LINE FILTER	
	SCW1	SDST3006Z	SCREW,X5	
	SCW2	SDST3008Z	SCREW,X4	
	SCW3	SPSG3008M	SCREW,X2	
	SLD1	PQ21503-1-2	SHIELD CASE,REG	
	SLD2	PQ34638	SHIELD COVER,REG	
⚠	SLD3	PQ46005	H.SINK(1),Q1	
⚠	SLD4	PQ46006	H.SINK(2),D14 D15 Q4 Q5 Q6	
	SLD5	PQ46048	PLATE(REG),X4	
	SPC1	PU60010-2	SPACER	
	CN1	PU60910-104	WIRE TRAP,(1-4) DISPLAY	
	CN2	PU59555-103	CONNECTOR,(1-3) PRE/REC	
	CN3	PU60910-107	WIRE TRAP,(3-9) MAIN	
	CN4	PU60910-104	WIRE TRAP,(1-4) TUNER	
	CN5	PU60910-105	CONNECTOR,(1-5) MAIN	
	CN6	PU59555-102	CONNECTOR,(1-2) MAIN	
⚠	CN101	PEMC1067	AC INLET	
⚠	F1	QMF51E2-1R25	FUSE	T1.2A

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MAIN BOARD ASSEMBLY <03>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA1	PB10824A-01	MAIN BOARD ASSY,HR-S5900EG
		PB10824B-01	MAIN BOARD ASSY,HR-S6900EG
	D11	1SS133	DIODE
	D12	1SS133	DIODE
	K1	PU60281-5	FERRATE BEADS
	JA1	PEMC0893-02	PIN JACK
	JA2	PEMC0893-03	PIN JACK
	JA3	PU60833-2	PIN JACK
	JA4	PU60833-3	PIN JACK
	J601	PW30343-0222408	WIRE
	CN1	PEMC0915-009	FFC CONNECTOR,(1-9) PRE/REC
	CN4	PU59555-3	CONNECTOR,(1-3) SW/JACK S6900EG
	CN5	PU59555-3	CONNECTOR,(1-3) SW/JACK S6900EG
	CN6	PU59555-5	CONNECTOR,(1-5) TUNER
	CN7	PEMC0969-113	B TO B CONNECTOR,(1-13)TERM
	CN9	PW30375-0221608	WIRE,TUNER
		PU59555-2	CONNECTOR,TUNER
	CN101	PU59555-4	CONNECTOR,(1-4) A/C HEAD
	CN102	PU59555-2	CONNECTOR,(1-2) FE HEAD
	CN201	PEMC0915-016	FFC CONNECTOR,(1-16) PRE/REC
	CN202	PEMC1053-030	B TO B CONNECTOR,(1-30) V UNI
	CN203	PEMC1053-030	B TO B CONNECTOR,(1-30) V UNI
	CN204	PEMC0714-013	CONNECTOR,(1-13) Y/C SEPA
	CN205	PEMC0714-012	CONNECTOR,(1-12) Y/C SEPA
	CN206	PEMC0969-113	B TO B CONNECTOR,(1-13)TERMIN
	CN207	PEMC0969-114	B TO B CONNECTOR,(1-14)TERM S5900EG
		PEMC0969-112	B TO B CONNECTOR,(1-12)TERM S6900EG
	CN208	PU59555-6	CONNECTOR,(1-6) TUNER
	CN209	PU60910-7	CONNECTOR,(3-9) SW REG
	CN212	PU59555-4	CONNECTOR,(1-4) EVR DEC.
	CN213	PU59555-2	CONNECTOR,(1-2) SW REG
	CN401	PU59555-3	CONNECTOR,(1-3) A/C HEAD
	CN402	PEMC0915-004	FFC CONNECTOR,(1-4) DRUM MOTO
	CN601	PEMC0915-016	FFC CONNECTOR,(1-16) DECK TER
	CN602	PEMC0915-004	FFC CONNECTOR,(1-4) SW/JACK
	CN603	PEMC0915-008	FFC CONNECTOR,(1-8) DISPLAY
	CN604	PU59555-8	CONNECTOR,(1-7) JOG
	CN605	PU60910-5	CONNECTOR,(1-5) SW REG
	CN606	PEMC0915-014	FFC CONNECTOR,(3-16) TUNER

- FMA AUDIO SECTION -

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	IC1	XRA15218N	IC
		or BA15218N	IC
	IC2	XRA15218N	IC,S6900EG
		or BA15218N	IC,S6900EG
	IC3	BA6138	IC
	IC4	XRA15218	IC
		or BA15218	IC
	IC5	MC14052BCP	IC
		or UPD4052BC	IC
	IC6	XRA15218	IC
		or BA15218	IC
	IC7	LA7151	IC
	IC8	LA7151	IC
	IC101	BA7795LS	IC
		or XRA7795LS	IC
	Q1	2SC3311A	TRANSISTOR

≠△	REF No.	PART No.	PART NAME, DESCRIPTION	
	Q2	2SD1450T	TRANSISTOR	
	Q3	2SC2412K(RS)	TRANSISTOR	
	Q4	2SC2412K(RS)	TRANSISTOR	
	Q5	2SC2412K(RS)	TRANSISTOR	
	Q6	2SC2412K(RS)	TRANSISTOR	
	Q7	DTA114ES	TRANSISTOR	
	Q101	DTC114WK	CHIP DEGI TRANSISTOR	
	Q102	DTC114WK	CHIP DEGI TRANSISTOR	
	Q103	2SA933S(RS)	TRANSISTOR	
	Q104	2SA933S(RS)	TRANSISTOR	
	Q105	2SA933S(RS)	TRANSISTOR	
	Q106	2SC2412K(RS)	TRANSISTOR	
	Q107	2SC2412K(RS)	TRANSISTOR	
	D1	MTZ2.0AT-77	ZENER DIODE	
	D2	MTZ12CT-77	ZENER DIODE	
	D3	1SS133	DIODE	
	D101	DAN202K	DIODE	
	D102	DAN202K	DIODE	
	D103	DAN202K	DIODE	
	R1	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R2	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R3	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R4	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R5	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R6	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R7	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R12	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R13	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R14	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R15	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R16	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R20	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R21	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R22	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R23	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R24	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R25	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R26	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R27	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R28	QRSA08J-473YN	RESISTOR,S6900EG	47kΩ,1/10W
	R29	QRSA08J-473YN	RESISTOR,S6900EG	47kΩ,1/10W
	R30	QRSA08J-182YN	RESISTOR,S6900EG	1.8kΩ,1/10W
	R31	QRSA08J-273YN	RESISTOR,S6900EG	27kΩ,1/10W
	R32	QRSA08J-103YN	RESISTOR,S6900EG	10kΩ,1/10W
	R33	QRSA08J-223YN	RESISTOR,S6900EG	22kΩ,1/10W
	R34	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R35	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R36	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R37	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R38	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R39	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R40	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R41	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R42	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R43	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R44	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R45	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R46	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R47	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R50	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R51	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R52	QRSA08J-103YN	RESISTOR	10kΩ,1/10W

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	R53	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R54	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R55	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R56	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R57	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R60	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R61	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R62	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R63	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R64	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R65	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R66	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R67	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R68	QRSA08J-473YN	RESISTOR,S5900EG	47kΩ,1/10W
		QRSA08J-393YN	RESISTOR,S6900EG	39kΩ,1/10W
	R69	QRSA08J-183YN	RESISTOR,S6900EG	18kΩ,1/10W
		QRSA08J-153YN	RESISTOR,S5900EG	15kΩ,1/10W
	R70	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R71	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R72	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R73	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R74	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R75	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R76	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R77	QRSA08J-393YN	RESISTOR,S6900EG	39kΩ,1/10W
		QRSA08J-473YN	RESISTOR,S5900EG	47kΩ,1/10W
	R78	QRSA08J-153YN	RESISTOR,S5900EG	15kΩ,1/10W
		QRSA08J-183YN	RESISTOR,S6900EG	18kΩ,1/10W
	R79	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R80	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R81	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R82	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R83	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R101	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R102	QRD161J-221	RESISTOR	220Ω,1/6W
	R103	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R105	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R106	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R107	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R108	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R109	QRSA08J-561YN	RESISTOR	560Ω,1/10W
	R110	QRSA08J-561YN	RESISTOR	560Ω,1/10W
	R111	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R112	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
	R113	QRSA08J-680YN	RESISTOR	68Ω,1/10W
	R114	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R115	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R116	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R117	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R118	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R119	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R120	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R121	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R122	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R123	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R124	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R125	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R126	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R127	QRSA08J-820YN	RESISTOR	82Ω,1/10W
	R128	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R129	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R130	QRSA08J-3R3YN	RESISTOR	3.3Ω,1/10W

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	R131	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R132	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R133	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R134	QRSA08J-151YN	RESISTOR	150Ω,1/10W
	R135	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R136	QRSA08J-3R3YN	RESISTOR	3.3Ω,1/10W
	R137	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R138	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R139	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R140	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R141	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R142	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	C1	QETC1CM-476	E CAPACITOR	47µF,16V
	C2	QETC1CM-476	E CAPACITOR	47µF,16V
	C3	QETC1CM-106	E CAPACITOR	10µF,16V
	C4	QETC1CM-106	E CAPACITOR	10µF,16V
	C7	QETC1CM-106	E CAPACITOR	10µF,16V
	C8	QETC1CM-106	E CAPACITOR	10µF,16V
	C9	QETC1CM-476	E CAPACITOR	47µF,16V
	C10	QETC1CM-476	E CAPACITOR	47µF,16V
	C11	QETC1CM-106	E CAPACITOR	10µF,16V
	C12	QETC1CM-106	E CAPACITOR	10µF,16V
	C16	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C17	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C18	QETC1CM-226	E CAPACITOR	22µF,16V
	C20	QETC1HM-105	E CAPACITOR	1µF,50V
	C27	QETC1HM-105	E CAPACITOR	1µF,50V
	C29	QETC1CM-226	E CAPACITOR	22µF,16V
	C30	QETC1CM-106	E CAPACITOR	10µF,16V
	C31	QETC1CM-106	E CAPACITOR	10µF,16V
	C32	QETC1CM-476	E CAPACITOR	47µF,16V
	C33	QETC1CM-476	E CAPACITOR	47µF,16V
	C34	QETC1CM-106	E CAPACITOR	10µF,16V
	C35	QETC1CM-106	E CAPACITOR	10µF,16V
	C37	QCYA1EK-104	CAPACITOR	0.1µF,25V
	C38	QCYA1EK-104	CAPACITOR	0.1µF,25V
	C39	QETC1HM-475	E CAPACITOR	4.7µF,50V
	C40	QETC1HM-475	E CAPACITOR	4.7µF,50V
	C41	QETC1CM-476	E CAPACITOR	47µF,16V
	C42	QETC1CM-106	E CAPACITOR	10µF,16V
	C43	QETC1CM-106	E CAPACITOR	10µF,16V
	C49	QETF1CM-106	E CAPACITOR,S6900EG	10µF,16V
	C50	QETF1CM-106	E CAPACITOR,S6900EG	10µF,16V
	C51	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C52	QETC1CM-106	E CAPACITOR	10µF,16V
	C53	QETF1CM-106	E CAPACITOR	10µF,16V
	C54	QETF1CM-106	E CAPACITOR	10µF,16V
	C55	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C56	QETC1HM-105	E CAPACITOR,S6900EG	1µF,50V
	C57	QETC1HM-105	E CAPACITOR,S6900EG	1µF,50V
	C58	QCYA1HK-391	CAPACITOR,S6900EG	390pF,50V
	C59	QETC1HM-105	E CAPACITOR,S6900EG	1µF,50V
	C60	QETC1HM-105	E CAPACITOR,S6900EG	1µF,50V
	C61	QETC1HM-106	E CAPACITOR,S6900EG	10µF,50V
	C101	QCYA1HK-272	CAPACITOR	0.0027µF,50V
	C102	QETC1CM-476	E CAPACITOR	47µF,16V
	C103	QETC1CM-106	E CAPACITOR	10µF,16V
	C104	QFLC1HJ-822Z	F CAPACITOR	0.0082µF,50V
	C105	QFLC1HJ-392Z	F CAPACITOR	0.0039µF,50V
	C106	QFLC1HJ-822Z	F CAPACITOR	0.0082µF,50V
	C107	QFLC1HJ-392Z	F CAPACITOR	0.0039µF,50V
	C108	PU60550-475	E CAPACITOR	4.7µF

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	C109	QCYA1HK-681	CAPACITOR	680pF,50V
	C111	QETC1CM-226	E CAPACITOR	22µF,16V
	C112	QCYA1HK-123	CAPACITOR	0.012µF,50V
	C114	QETC1HM-104	E CAPACITOR	0.1µF,50V
	C115	QETC1HM-105	E CAPACITOR	1µF,50V
	C117	QCYA1HK-223	CAPACITOR	0.022µF,50V
	C118	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C119	QCYA1HK-332	CAPACITOR	0.0033µF,50V
	C120	QETC1CM-106	E CAPACITOR	10µF,16V
	C121	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
	C122	QCYA1HK-331	CAPACITOR	330pF,50V
	C123	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C124	QCYA1HK-332	CAPACITOR	0.0033µF,50V
	C125	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C126	QETC1CM-106	E CAPACITOR	10µF,16V
	C127	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
	C133	QCSA1HJ-821	CAPACITOR	820pF,50V
	C134	QCSA1HJ-821	CAPACITOR	820pF,50V
	L1	PELN0530-101JZ	COIL	100µH
	L101	PU58308-123J	COIL	12mH
△	T101	PELN0860	OSC TRANSFORMER	
△	T102	PELN0861	OSC TRANSFORMER	
	SLD1	PU59960	P/R AMP SHIELD1	
△	CP1	ICP-N10	CIRCUIT PROTECTOR	

– VIDEO SECTION –

#△	REF No.	PART No.	PART NAME, DESCRIPTION
	IC201	BA7106LS	IC
		or XRA7106LS	IC
	IC202	TC4S584F	IC
	IC203	M62354FP	IC
	IC205	TC7W02F	IC
	IC206	TC7S04F	IC
	IC207	BA226F	IC
	IC208	MC74HC4066F	IC
		or TC74HC4066AF	IC
	IC209	MC74HC74F	IC
		or TC74HC74AF	IC
	IC301	M52363SP	IC
	Q201	DTC144WK	TRANSISTOR
	Q202	DTC144WK	TRANSISTOR
	Q203	2SC2412K(RS)	TRANSISTOR
	Q204	2SA1037K(QRS)	TRANSISTOR
	Q205	DTA144EK	TRANSISTOR
	Q206	DTC144WK	TRANSISTOR
	Q207	2SC2412K(RS)	TRANSISTOR
	Q208	2SC2412K(RS)	TRANSISTOR
	Q209	DTC144WK	TRANSISTOR
	Q210	2SA1037K(QRS)	TRANSISTOR
	Q211	2SA1037K(QRS)	TRANSISTOR
	Q213	DTC144WK	TRANSISTOR
	Q214	DTA144EK	TRANSISTOR
	Q215	DTA144EK	TRANSISTOR
	Q216	DTC144WK	TRANSISTOR
	Q217	2SA1037K(QRS)	TRANSISTOR
	Q218	DTC144WK	TRANSISTOR
	Q221	DTC144WK	TRANSISTOR
	Q222	2SC2412K(RS)	TRANSISTOR
	Q223	2SC2412K(RS)	TRANSISTOR
	Q224	DTC144WK	TRANSISTOR
	Q225	2SC2412K(RS)	TRANSISTOR
	Q227	2SA1037K(QRS)	TRANSISTOR

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
Q228	DTC144WK	TRANSISTOR	
Q229	2SA1037K(QRS)	TRANSISTOR	
Q230	2SC2412K(RS)	TRANSISTOR	
Q231	2SA1037K(QRS)	TRANSISTOR	
Q232	FMC2	TRANSISTOR	
Q233	DTC144WK	TRANSISTOR	
Q234	DTC144WK	TRANSISTOR	
Q235	DTC144WK	TRANSISTOR	
Q236	2SA1036K(QR)	TRANSISTOR	
Q237	2SC2411K(QR)	TRANSISTOR	
Q238	2SA1036K(QR)	TRANSISTOR	
Q239	2SC2411K(QR)	TRANSISTOR	
Q241	DTC144WK	TRANSISTOR	
Q242	DTA144EK	TRANSISTOR	
Q243	DTC144WK	TRANSISTOR	
Q244	DTA144EK	TRANSISTOR	
Q245	DTA144ES	TRANSISTOR	
Q301	DTC144WK	TRANSISTOR	
Q302	DTC144EK	TRANSISTOR	
Q303	DTC144EK	TRANSISTOR	
Q304	DTC144WK	TRANSISTOR	
Q305	DTA143TK	TRANSISTOR	
Q306	DTA143TK	TRANSISTOR	
Q307	2SC2412K(RS)	TRANSISTOR	
Q308	2SA1037K(QRS)	TRANSISTOR	
Q309	2SC2412K(RS)	TRANSISTOR	
Q310	2SC2412K(RS)	TRANSISTOR	
Q311	2SA1037K(QRS)	TRANSISTOR	
Q312	DTA144EK	TRANSISTOR	
Q313	DTC143EK	TRANSISTOR	
Q314	2SC2412K(RS)	TRANSISTOR	
Q315	2SA1037K(QRS)	TRANSISTOR	
Q316	2SC2412K(RS)	TRANSISTOR	
D201	RD5.1ES-T1B2	ZENER DIODE	
D202	1SS355	DIODE	
D203	DAP202K	DIODE	
D204	DAP202K	DIODE	
D205	DAN202K	DIODE	
D206	1SS355	DIODE	
D207	DAP202K	DIODE	
D208	DAN202K	DIODE	
D209	1SS133	DIODE	
D210	DAP202K	DIODE	
D211	1SS133	DIODE	
D213	DAN202K	DIODE	
D215	1SS133	DIODE	
D216	DAN202K	DIODE	
D217	DAN202K	DIODE	
D218	DAP202K	DIODE	
D219	DAP202K	DIODE	
D222	DAP202K	DIODE	
D301	1SS133	DIODE	
D302	DAN202K	DIODE	
R201	QRG02DJ-102X	OMF RESISTOR	1kΩ,2W
R202	QRSA08J-914YN	RESISTOR	910kΩ,1/10W
R203	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R204	QRD161J-273	RESISTOR	27kΩ,1/6W
R205	QRD161J-103	RESISTOR	10kΩ,1/6W
R206	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R207	QRSA08J-911YN	RESISTOR	910Ω,1/10W
R208	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R209	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R210	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R211	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R212	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R213	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R214	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R215	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R216	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R217	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R218	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R219	QRSA08J-623YN	RESISTOR	62kΩ,1/10W
R220	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R221	QRSA08J-623YN	RESISTOR	62kΩ,1/10W
R222	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R223	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R224	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R225	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R226	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R227	QRSA08J-131YN	RESISTOR	130Ω,1/10W
R228	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R229	QRSA08J-910YN	RESISTOR	91Ω,1/10W
R230	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R231	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R232	QRSA08J-751YN	RESISTOR	750Ω,1/10W
R233	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R235	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R236	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R237	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R238	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R240	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R243	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R245	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R246	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R248	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R249	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R250	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R252	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R253	QRSA08G-752YN	RESISTOR	7.5kΩ,1/10W
R254	NRVA62D-431N	RESISTOR	430Ω,1/16W
R255	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R258	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R260	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R261	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R262	NRVA62D-102N	RESISTOR	1kΩ,1/16W
R263	QRSA08J-475YN	RESISTOR	4.7MΩ,1/10W
R264	NRVA62D-431N	RESISTOR	430Ω,1/16W
R265	NRVA62D-822N	RESISTOR	8.2kΩ,1/16W
R266	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R267	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R268	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R269	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R270	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R271	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R272	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R273	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R274	QRD123J-331SX	RESISTOR	330Ω,1/2W
R275	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R276	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R277	QRSA08J-752YN	RESISTOR	7.5kΩ,1/10W
R278	QRSA08J-512YN	RESISTOR	5.1kΩ,1/10W
R279	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R280	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R281	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R282	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R283	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R284	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R285	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R286	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R287	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R288	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R289	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R290	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R291	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R301	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R302	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R303	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R304	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R305	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R306	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R307	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R308	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R309	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R310	QRSA08J-751YN	RESISTOR	750Ω,1/10W
R311	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R312	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R314	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R315	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R316	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R317	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R318	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R320	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R321	QRSA08J-513YN	RESISTOR	51kΩ,1/10W
R322	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R323	QRSA08J-133YN	RESISTOR	13kΩ,1/10W
R324	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R326	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R327	QRSA08J-621YN	RESISTOR	620Ω,1/10W
R328	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R329	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R330	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R331	QRSA08J-621YN	RESISTOR	620Ω,1/10W
R332	QRSA08J-201YN	RESISTOR	200Ω,1/10W
R333	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R334	QRSA08J-911YN	RESISTOR	910Ω,1/10W
R335	QRSA08J-203YN	RESISTOR	20kΩ,1/10W
R336	QRSA08J-390YN	RESISTOR	39Ω,1/10W
R337	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R338	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R339	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R340	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R341	QRSA08J-431YN	RESISTOR	430Ω,1/10W
R342	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
C201	QETC1HM-105	E CAPACITOR	1μF,50V
C202	QEK61CM-106	E CAPACITOR	10μF,16V
C203	QEK61EM-335	E CAPACITOR	3.3μF,25V
C204	QCSA1HJ-471	CAPACITOR	470pF,50V
C206	QCSA1HJ-390	CAPACITOR	39pF,50V
C207	QCYA1HK-103	CAPACITOR	0.01μF,50V
C208	QETC0JM-476	E CAPACITOR	47μF,6.3V
C209	QCSA1HJ-5R0	CAPACITOR	5pF,50V
C210	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C211	QCTA1CH-820	CAPACITOR	82pF,16V
C212	QCTA1CH-181	CAPACITOR	180pF,16V
C213	QCTA1CH-220	CAPACITOR	22pF,16V
C214	QFN31HJ-471	F CAPACITOR	470pF,50V
C215	QETC1CM-476	E CAPACITOR	47μF,16V
C216	QETC0JM-476	E CAPACITOR	47μF,6.3V
C217	QCYA1HK-103	CAPACITOR	0.01μF,50V
C218	QCYA1HK-103	CAPACITOR	0.01μF,50V
C219	QFN31HJ-104	F CAPACITOR	0.1μF,50V
C220	QFN31HJ-104	F CAPACITOR	0.1μF,50V
C221	QETC0JM-476	E CAPACITOR	47μF,6.3V
C222	QCYA1HK-103	CAPACITOR	0.01μF,50V
C223	QCYA1HK-103	CAPACITOR	0.01μF,50V
C224	QCYA1HK-103	CAPACITOR	0.01μF,50V
C225	QCYA1HK-103	CAPACITOR	0.01μF,50V
C226	QETC1CM-476	E CAPACITOR	47μF,16V
C227	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C229	QCSA1HJ-361	CAPACITOR	360pF,50V
C230	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C231	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C234	QCSA1HG-391	CAPACITOR	390pF,50V
C237	QCSA1HJ-390	CAPACITOR	39pF,50V
C238	QCYA1HK-473	CAPACITOR	0.047μF,50V
C239	QCSA1HJ-560	CAPACITOR	56pF,50V
C244	QCYA1HK-103	CAPACITOR	0.01μF,50V
C245	QETC0JM-476	E CAPACITOR	47μF,6.3V
C246	QCYA1HK-103	CAPACITOR	0.01μF,50V
C247	QCYA1HK-103	CAPACITOR	0.01μF,50V
C248	QEKF0JM-476	E CAPACITOR	47μF,6.3V
C252	QETC0JM-476	E CAPACITOR	47μF,6.3V
C254	QCYA1HK-103	CAPACITOR	0.01μF,50V
C255	QETC1CM-106	E CAPACITOR	10μF,16V
C256	QETC1CM-106	E CAPACITOR	10μF,16V
C258	QCYA1HK-103	CAPACITOR	0.01μF,50V
C259	QCYA1HK-103	CAPACITOR	0.01μF,50V
C260	QCSA1HJ-430	CAPACITOR	43pF,50V
C261	QCSA1HG-390	CAPACITOR	39pF,50V
C262	QCSA1HG-151	CAPACITOR	150pF,50V
C263	QCSA1HG-560	CAPACITOR	56pF,50V
C264	QCSA1HG-471	CAPACITOR	470pF,50V
C265	QCSA1HG-750	CAPACITOR	75pF,50V
C266	QCSA1HG-100	CAPACITOR	10pF,50V
C267	QCSA1HG-390	CAPACITOR	39pF,50V
C268	QETC0JM-476	E CAPACITOR	47μF,6.3V
C269	QCYA1EK-104	CAPACITOR	0.1μF,25V
C270	QETC1HM-474	E CAPACITOR	0.47μF,50V
C271	QCYA1HK-103	CAPACITOR	0.01μF,50V
C272	QCYA1HK-103	CAPACITOR	0.01μF,50V
C273	QCSA1HG-470	CAPACITOR	47pF,50V
C301	QCSA1HG-470	CAPACITOR	47pF,50V
C302	QCSA1HJ-510	CAPACITOR	51pF,50V
C303	QCSA1HJ-3R0	CAPACITOR	3pF,50V
C304	QCSA1HJ-360	CAPACITOR	36pF,50V
C305	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C306	QCSA1HJ-151	CAPACITOR	150pF,50V
C307	QCSA1HJ-560	CAPACITOR	56pF,50V
C308	QCYA1HK-103	CAPACITOR	0.01μF,50V
C309	QETC0JM-476	E CAPACITOR	47μF,6.3V
C310	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C311	QCSA1HJ-560	CAPACITOR	56pF,50V
C312	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C313	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C314	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C315	QCSA1HJ-430	CAPACITOR	43pF,50V
C316	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C317	QCFA1HZ-103	CAPACITOR	0.01μF,50V

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	C318	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C319	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C320	QCFA1HZ-103	CAPACITOR	0.01µF,50V
	C321	QCFA1HZ-103	CAPACITOR	0.01µF,50V
	C322	QCFA1HZ-103	CAPACITOR	0.01µF,50V
	C324	QCFA1HZ-103	CAPACITOR	0.01µF,50V
	C325	QCVB1CN-103	CAPACITOR	0.01µF,16V
	C326	QCSA1HJ-120	CAPACITOR	12pF,50V
	C327	QCYA1EK-104	CAPACITOR	0.1µF,25V
	C328	QCSA1HJ-271	CAPACITOR	270pF,50V
	C329	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C330	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C331	QCFA1HZ-103	CAPACITOR	0.01µF,50V
	C332	QCSA1HJ-102	CAPACITOR	0.001µF,50V
	C333	QCSA1HJ-221	CAPACITOR	220pF,50V
	C334	QCSA1HJ-680	CAPACITOR	68pF,50V
	C335	QCSA1HJ-430	CAPACITOR	43pF,50V
	L201	PU48530-101K	COIL	100µH
	L202	PU48530-101K	COIL	100µH
	L203	PU48530-101K	COIL	100µH
	L204	PU48530-101K	COIL	100µH
	L205	PU48530-101K	COIL	100µH
	L208	PU48530-222J	COIL	2.2mH
	L209	PU59988-221J	COIL	220µH
	L211	PU48530-101K	COIL	100µH
	L212	PU48530-101K	COIL	100µH
△	L215	PU48530-102J	COIL	1mH
	L216	PU59988-151JY	COIL	150µH
	L217	PU48530-471J	COIL	470µH
	L218	PU59988-120J	COIL	12µH
	L219	PU59988-120J	COIL	12µH
	L301	PU59988-330J	COIL	33µH
	L302	PU59988-150J	COIL	15µH
	L303	PU59988-560J	COIL	56µH
	L304	PU59988-101J	COIL	100µH
	L305	PU48530-101K	COIL	100µH
	L306	PU59988-680J	COIL	68µH
	L307	PU59988-121JY	COIL	120µH
	L308	PU48530-101K	COIL	100µH
	L309	PU48530-101K	COIL	100µH
	L310	PU59988-180J	COIL	18µH
	L311	PU59988-680J	COIL	68µH
	L312	PU48530-121J	COIL	120µH
	LC201	PU60655	COIL, SECAM DET	
	LC202	PU60714	EQUALIZER	
	LC205	PU60813	LCF	

– SERVO SECTION –

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	IC401	HD49780NT	IC	
	IC451	BA7039	IC	
		or XRA7039	IC	
	IC472	XRA10358	IC	
		or UPC358C	IC	
		or LM358P	IC	
		or BA10358	IC	
		or LMT358N	IC	
	IC473	XRU4011B	IC	
		or UPD4011BC	IC	
		or MC14011BCP	IC	
		or TC4011BP	IC	
	IC474	MC14161BCP	IC	
		or TC40161BP	IC	
		or UPD4161BC	IC	
	Q472	DTC143TS	TRANSISTOR	
	D401	1SS133	DIODE	
	D402	1SS133	DIODE	
	D403	1SS133	DIODE	
	D477	1SS133	DIODE	
	R401	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R402	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R403	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R404	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R405	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
	R406	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R407	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R408	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R409	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R410	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R411	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
	R412	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R413	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R414	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R415	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R416	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R417	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R418	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R419	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R421	QRSA08J-394YN	RESISTOR	390kΩ,1/10W
	R423	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R424	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R429	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R430	QRSA08J-475YN	RESISTOR	4.7MΩ,1/10W
	R431	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
	R432	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R436	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R438	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R445	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R448	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R449	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R451	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R452	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R453	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R454	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R455	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R456	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
	R485	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	C401	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C402	QEKF0JM-226	E CAPACITOR	22µF,6.3V
	C403	QEKF0JM-226	E CAPACITOR	22µF,6.3V
	C404	QCTA1CH-101	CAPACITOR	100pF,16V
	C405	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C406	QFLC1HJ-223Z	F CAPACITOR	0.022µF,50V
	C407	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C408	QCC31CK-563	CAPACITOR	0.056µF,16V
	C409	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C410	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C411	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C412	QEKF1CM-106	E CAPACITOR	10µF,16V
	C413	QFV11HJ-224AZ	F CAPACITOR	0.22µF,50V
	C414	QFLC1HJ-222Z	F CAPACITOR	0.0022µF,50V
	C415	QEKF1EM-475	E CAPACITOR	4.7µF,25V
	C416	QEKF1EM-475	E CAPACITOR	4.7µF,25V
	C417	QEKF1CM-106	E CAPACITOR	10µF,16V
	C418	QEKF1CM-106	E CAPACITOR	10µF,16V
	C419	QFLC1HJ-153Z	F CAPACITOR	0.015µF,50V
	C420	QFV11HJ-124AZ	F CAPACITOR	0.12µF,50V
	C421	QCTA1CH-471	CAPACITOR	470pF,16V
	C431	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C451	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C452	QCC31CK-104	CAPACITOR	0.1µF,16V
	C453	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C454	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C455	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C456	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C458	QEKF1CM-106	E CAPACITOR	10µF,16V
	C459	QFV11HJ-104AZ	F CAPACITOR	0.1µF,50V
	C478	QCYA1EK-103	CAPACITOR	0.01µF,25V
	C479	QEKF1CM-106	E CAPACITOR	10µF,16V
	L451	PU59152-270J	COIL	27µH
△	CP401	ICP-N15	CIRCUIT PROTECTOR	

– SYSCON SECTION –

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	IC601	HD6433927A65F	QFP IC (MCU)	
	IC602	M50255P	IC	
	IC603	CAT35C104P-041	IC	
	IC604	S-80728AN	IC	
		or RE5VA28A	IC	
	IC605	TC7S14F	IC	
	Q601	DTC114EK	TRANSISTOR	
	Q602	DTC114TK	TRANSISTOR	
	Q603	2SB1256	TRANSISTOR	
	Q604	DTC114EK	TRANSISTOR	
	Q605	DTA114EK	TRANSISTOR	
	Q606	DTC114EK	TRANSISTOR	
	Q607	DTC124EK	TRANSISTOR	
	Q608	2SC2412K(RS)	TRANSISTOR	
	Q609	DTC124EK	TRANSISTOR	
	Q610	DTC114EK	TRANSISTOR	
	D601	1SS133	DIODE	
	D602	1SS133	DIODE	
	D603	1SS133	DIODE	
	D604	1SS133	DIODE	
	D605	1SS133	DIODE	
	D606	1SS133	DIODE	
	D607	11E2-T5	DIODE	
	D608	11E2-T5	DIODE	
	D609	11E2-T5	DIODE	
	D610	11E2-T5	DIODE	
	D611	1SS133	DIODE	
	D612	1SS133	DIODE	
	D613	1SS133	DIODE	
	D614	11E2-T5	DIODE	
	R601	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R602	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R603	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R604	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R605	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R606	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R607	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R608	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R609	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R610	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R611	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R612	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R613	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R614	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R615	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R616	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R617	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R618	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R619	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R620	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R621	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R622	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R623	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R624	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R625	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R626	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R627	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R628	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R629	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R630	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R631	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R632	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R633	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R634	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R635	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R636	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R637	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R638	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R639	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R640	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R641	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R642	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R643	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R644	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R645	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R646	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R647	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R648	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R649	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R650	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R651	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R652	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R653	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R654	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R655	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R656	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R657	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R658	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R659	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R660	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R661	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R662	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R663	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R664	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R665	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R666	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R667	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R668	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R669	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R670	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R671	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R672	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R673	QRSA08J-104YN	RESISTOR	100kΩ,1/10W

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	R674	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R675	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R676	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R677	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R678	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R679	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R680	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R682	QRSA08J-303YN	RESISTOR	30kΩ,1/10W
	R683	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R684	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R685	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R686	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R687	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R688	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R689	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R690	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
	R691	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R692	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R693	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R694	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R695	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R696	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R698	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R699	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	C601	QEKF1CM-106	E CAPACITOR	10μF,16V
	C602	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C605	QEKF1CM-106	E CAPACITOR	10μF,16V
	C606	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C607	PU60676-223	E CAPACITOR	0.022μF,5.5V
	C608	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C623	QCTA1CH-270	CAPACITOR	27pF,16V
	C624	QAT3120-450Z	TRIM CAPACITOR, TIMER CLOCK	
	C625	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C628	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C629	QCF11HP-473	CAPACITOR	0.047μF,50V
	C633	QER61EM-106	E CAPACITOR	10μF,25V
	L602	PU54223-100J	COIL	10μH
△	CF601	PEVB0497	RESONATOR	
△	X601	PEVB0422	CRYSTAL RESONATOR	
△	TH601	PESC1089-Z	POSI THERMISTOR	
△	CP601	ICP-N20	CIRCUIT PROTECTOR	

- VIDEO CPU SECTION -

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	IC701	M37470M3-051SP	IC	
		or M37470E8-142SP	IC	
		or M37470M8-142SP	IC	
	R701	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R702	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R703	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R704	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R705	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R706	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R707	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R708	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R709	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R710	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R711	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R712	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R713	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R714	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R715	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R716	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R717	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R718	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R719	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R720	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R721	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R722	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R723	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R724	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R725	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R726	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R727	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R728	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	C701	QCSA1HJ-220	CAPACITOR	22pF,50V
	C702	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C703	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C704	QCSA1HJ-220	CAPACITOR	22pF,50V
	C705	QCSA1HJ-220	CAPACITOR	22pF,50V
	C706	QCSA1HJ-220	CAPACITOR	22pF,50V
	C708	QCSA1HJ-470	CAPACITOR	47pF,50V
	C710	QEKF1HM-335	E CAPACITOR	3.3μF,50V
	C711	QCSA1HJ-101	CAPACITOR	100pF,50V
	C712	QCSA1HJ-101	CAPACITOR	100pF,50V
	C713	QCSA1HJ-101	CAPACITOR	100pF,50V
△	CF701	PEVB0340	RESONATOR	

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VIDEO UNIT BOARD ASSEMBLY <05>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB10831A-01	VIDEO UNIT BOARD ASSEMBLY	
	IC1	JCP0044	IC	
	IC2	M62353GP	IC	
	IC3	NJM431U-XE	IC	
	IC4	VC2076MP-XE	IC	
	IC5	HA118092FP-XE	IC	
	IC6	CAT35C104P-045	IC	
	IC7	TC7S08F	IC	
	Q1	2SA1576(QRS)	TRANSISTOR	
	Q2	DTC144WU	TRANSISTOR	
	Q4	DTA144EU	TRANSISTOR	
	Q5	2SC4081(QRS)	TRANSISTOR	
	Q6	2SA1576(QRS)	TRANSISTOR	
	Q7	DTA144EU	TRANSISTOR	
	Q8	DTC144WU	TRANSISTOR	
	Q9	DTC144WU	TRANSISTOR	
	Q11	DTC144WU	TRANSISTOR	
	Q12	DTC144WU	TRANSISTOR	
	Q13	2SC4081(QRS)	TRANSISTOR	
	D1	DAP202U	DIODE	
	D2	DAN202U	DIODE	
	D3	1SS355	DIODE	
	R2	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R3	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R5	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
	R6	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
	R7	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R8	NRSA63J-333N	RESISTOR	33kΩ,1/16W
	R9	NRVA63D-822N	RESISTOR	8.2kΩ,1/16W

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	R10	NRVA63D-152N	RESISTOR	1.5kΩ,1/6W
	R11	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R13	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R14	NRSA63J-821N	RESISTOR	820Ω,1/16W
	R17	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R18	NRVA63D-391N	RESISTOR	390Ω,1/16W
	R19	NRVA63D-102N	RESISTOR	1kΩ,1/16W
	R20	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R21	NRSA63J-242N	RESISTOR	2.4kΩ,1/16W
	R23	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R24	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R25	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R26	NRSA63J-151N	RESISTOR	150Ω,1/16W
	R27	NRSA63J-162N	RESISTOR	1.6kΩ,1/16W
	R28	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R29	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R30	NRVA63D-102N	RESISTOR	1kΩ,1/16W
	R31	NRVA63D-471N	RESISTOR	470Ω,1/16W
	R32	NRVA63D-102N	RESISTOR	1kΩ,1/16W
	R33	NRVA63D-152N	RESISTOR	1.5kΩ,1/6W
	R34	NRVA63D-332N	RESISTOR	3.3kΩ,1/16W
	R35	NRVA63D-332N	RESISTOR	3.3kΩ,1/16W
	R37	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R38	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R39	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R40	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R41	NRSA63J-823N	RESISTOR	82kΩ,1/16W
	R43	NRSA63J-273N	RESISTOR	27kΩ,1/16W
	R45	NRSA63J-181N	RESISTOR	180Ω,1/16W
	R46	NRSA63J-912N	RESISTOR	9.1kΩ,1/16W
	R47	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R48	NRVA63D-243N	RESISTOR	24kΩ,1/6W
	R49	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R50	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R51	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R52	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R53	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R54	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R55	NRVA63D-272N	RESISTOR	2.7kΩ,1/16W
	R56	NRVA63D-682N	RESISTOR	6.8kΩ,1/16W
	R57	NRVA63D-162N	RESISTOR	1.6kΩ,1/16W
	R58	NRVA63D-682N	RESISTOR	6.8kΩ,1/16W
	R59	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R60	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R61	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R62	NRSA63J-221N	RESISTOR	220Ω,1/16W
	R63	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R64	NRSA63J-475N	RESISTOR	4.7MΩ,1/16W
	R65	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R68	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R69	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R70	NRSA63J-272N	RESISTOR	2.7kΩ,1/16W
	R73	NRSA63J-684N	RESISTOR	680kΩ,1/16W
	R74	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R75	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R77	NRSA63J-105N	RESISTOR	1MΩ,1/16W
	R78	NRSA63J-754N	RESISTOR	750kΩ,1/16W
	R79	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R83	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R84	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	C1	QETC1HM-224	E CAPACITOR	0.22μF,50V
	C2	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C5	QETC1HM-105	E CAPACITOR	1μF,50V
	C7	QETC1HM-104	E CAPACITOR	0.1μF,50V
	C8	NCT08CH-360A	CAPACITOR	36pF,50V
	C10	NCF31EZ-104A	CAPACITOR	0.1μF,25V
	C11	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C12	QETC1EM-106	E CAPACITOR	10μF,25V
	C13	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C14	NCF31EZ-104A	CAPACITOR	0.1μF,25V
	C15	QETC1EM-475	E CAPACITOR	4.7μF,25V
	C16	NCB31EK-123A	CAPACITOR	0.012μF,25V
	C17	QCYA1EK-563	CAPACITOR	0.056μF,25V
	C18	QETC1HM-105	E CAPACITOR	1μF,50V
	C19	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C20	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C21	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C23	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C24	QETC1HM-334	E CAPACITOR	0.33μF,50V
	C25	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C26	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C27	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C28	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C29	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C30	NCB31EK-103A	CAPACITOR	0.01μF,25V
	C31	NCT08CH-161A	CAPACITOR	160pF,50V
	C33	QETC1HM-104	E CAPACITOR	0.1μF,50V
	C35	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C36	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C37	QETC1HM-474	E CAPACITOR	0.47μF,50V
	C38	QETC1HM-104	E CAPACITOR	0.1μF,50V
	C39	QETC1EM-335	E CAPACITOR	3.3μF,25V
	C40	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C41	QETC1CM-106	E CAPACITOR	10μF,16V
	C42	QETC1CM-106	E CAPACITOR	10μF,16V
	C43	QCC31EK-473	CAPACITOR	0.047μF,25V
	C44	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C45	QETC1CM-226	E CAPACITOR	22μF,16V
	C46	NCS31HJ-470A	CAPACITOR	47pF,50V
	C47	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C48	QETC1CM-226	E CAPACITOR	22μF,16V
	C49	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C50	NCF31EZ-104A	CAPACITOR	0.1μF,25V
	C51	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C52	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C53	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C54	NCS31HJ-101A	CAPACITOR	100pF,50V
	C55	NCS31HJ-101A	CAPACITOR	100pF,50V
	C56	QETC1EM-475	E CAPACITOR	4.7μF,25V
	C57	NCS31HJ-301A	CAPACITOR	300pF,50V
	C58	NCS31HJ-301A	CAPACITOR	300pF,50V
	C59	NCS31HJ-181A	CAPACITOR	180pF,50V
	C60	NCS31HJ-101A	CAPACITOR	100pF,50V
	C61	NCS31HG-271A	CAPACITOR	270pF,50V
	C62	NCS31HG-820A	CAPACITOR	82pF,50V
	C63	NCS31HG-221A	CAPACITOR	220pF,50V
	C64	NCS31HG-301A	CAPACITOR	300pF,50V
	C65	NCS31HG-301A	CAPACITOR	300pF,50V
	C66	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C67	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C69	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C70	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C71	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C72	NCS31HJ-331A	CAPACITOR	330pF,50V

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	C73	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C74	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C75	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C76	NCB31EK-223A	CAPACITOR	0.022μF,25V
	C77	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C78	QETC1CM-106	E CAPACITOR	10μF,16V
	C79	QETC1CM-106	E CAPACITOR	10μF,16V
	C80	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C81	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C84	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C85	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C86	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C87	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C88	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C89	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C92	NCS31HJ-330A	CAPACITOR	33pF,50V
	C99	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C102	NCB31EK-103A	CAPACITOR	0.01μF,25V
	C104	QETC1HM-224	E CAPACITOR	0.22μF,50V
	L1	PU59153-822J	COIL	8.2mH
△	L2	PU48530-271K	COIL	270μH
△	L4	PU48530-331K	COIL	330μH
	L6	PU58201-270J	COIL	27μH
	L7	PU48530-101K	COIL	100μH
	L8	PU48530-101K	COIL	100μH
	L9	PU48530-101K	COIL	100μH
	LC1	PELN0938-S	LC FILTER	
	LC2	PELN0945-S	LC FILTER	
	LC4	PELN0940-S	LC TRAP	
	LC5	PELN0940-S	LC TRAP	
△	X1	PEVB0550-Z	CRYSTAL RESONATOR	
	CN1	PEMC1054-130	B TO B CONNECTOR,(1-30) MAIN	
	CN2	PEMC1054-130	B TO B CONNECTOR,(1-30) MAIN	

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TERMINAL BOARD ASSEMBLY <06>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB10804A-01	TERMINAL BOARD ASSY,S5900EG	
		PB10804B-01	TERMINAL BOARD ASSY,S6900EG	
	IC1	MC74HC4052N	IC	
		or TC74HC4052AP	IC	
	IC2	MC74HC4053N	IC	
		or TC74HC4053AP	IC	
	IC3	MC74HC4051N	IC	
		or TC74HC4051AP	IC	
	IC4	MM1031XS	IC	
	IC5	BA7623F	IC	
	IC6	HA118070	IC	
	IC7	TC7S66F	IC	
	Q1	2SA1576(QRS)	TRANSISTOR	
	Q2	2SA1576(QRS)	TRANSISTOR	
	Q3	2SA1577(QRS)	TRANSISTOR	
	Q4	DTC143TU	TRANSISTOR	
	Q5	DTA124EU	TRANSISTOR	
	Q6	2SC4081(QRS)	TRANSISTOR	
	Q7	2SC4081(QRS)	TRANSISTOR	
	Q8	2SC4081(QRS)	TRANSISTOR	
	Q9	2SC4081(QRS)	TRANSISTOR	
	Q10	2SC4081(QRS)	TRANSISTOR	
	Q11	2SC4081(QRS)	TRANSISTOR	
	Q12	2SC4081(QRS)	TRANSISTOR	
	Q13	DTA144EU	TRANSISTOR	
	Q14	DTC144WU	TRANSISTOR	
	Q15	2SA1576(QRS)	TRANSISTOR	
	Q16	2SC4081(QRS)	TRANSISTOR	
	Q17	2SC4081(QRS)	TRANSISTOR	
	Q18	DTC144WU	TRANSISTOR	
	Q19	2SA1576(QRS)	TRANSISTOR	
	D1	1SS133	DIODE	
	D2	DAN202U	DIODE	
	D4	DAN202U	DIODE	
	D6	1SS133	DIODE	
	D7	1SS133	DIODE	
	D8	1SS133	DIODE	
	R1	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R2	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R3	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R4	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R5	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R6	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R7	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R8	QRSA08J-622YN	RESISTOR	6.2kΩ,1/10W
	R9	QRSA08J-622YN	RESISTOR	6.2kΩ,1/10W
	R10	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R11	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R12	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R13	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R14	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R15	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R16	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R17	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R18	QRD161J-750	RESISTOR	75Ω,1/6W
	R20	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R22	QRD161J-750	RESISTOR	75Ω,1/6W
	R23	QRD161J-152	RESISTOR	1.5kΩ,1/6W
	R24	QRSA08J-750YN	RESISTOR	75Ω,1/10W
	R25	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R26	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R27	QRD123J-391SX	RESISTOR	390Ω,1/2W
	R28	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R29	QRD161J-750	RESISTOR	75Ω,1/6W
	R30	QRSA08J-750YN	RESISTOR,S6900EG	75Ω,1/10W
	R31	QRSA08J-750YN	RESISTOR,S6900EG	75Ω,1/10W
	R32	QRSA08J-750YN	RESISTOR,S6900EG	75Ω,1/10W
	R33	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R34	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R35	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R36	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R37	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R39	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R40	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R41	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R42	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R43	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R44	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R45	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R46	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R47	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R48	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R49	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R50	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R51	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R52	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R53	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R54	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R55	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R56	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R57	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R58	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R59	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R60	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R61	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R62	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R63	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R64	QRSA08J-154YN	RESISTOR	150kΩ,1/10W
	R65	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R66	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R67	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R68	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R69	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R70	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R71	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R72	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R73	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R74	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R75	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R76	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R801	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R802	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R803	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R804	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R851	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R852	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R853	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R854	QRD181J-0R0	RESISTOR	0Ω,1/8W
	C1	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C2	QEK61CM-106	E CAPACITOR	10μF,16V
	C3	QEK61CM-106	E CAPACITOR	10μF,16V
	C4	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C5	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C6	QEK60JM-476	E CAPACITOR	47μF,6.3V
	C7	QEK61CM-106	E CAPACITOR	10μF,16V
	C8	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C9	QEK60JM-476	E CAPACITOR	47μF,6.3V
	C10	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C11	QEK60JM-476	E CAPACITOR	47μF,6.3V
	C12	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C13	PECA0783-108MZ	E CAPACITOR	
	C14	PECA0783-108MZ	E CAPACITOR	
	C15	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C16	QEK60JM-476	E CAPACITOR	47μF,6.3V
	C17	PECA0783-108MZ	E CAPACITOR	
	C18	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C19	QCVB1CN-103	CAPACITOR	0.01μF,16V
	C20	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C21	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C22	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C23	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C24	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C25	QEK61AM-476	E CAPACITOR	47μF,10V
	C26	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C27	QETC1CM-476	E CAPACITOR	47μF,16V
	C28	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C29	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C30	QETC1CM-106	E CAPACITOR	10μF,16V
	C31	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C32	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C33	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C34	QETC1HM-105	E CAPACITOR	1μF,50V
	C35	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C36	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C37	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C38	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C39	QCSA1HJ-560	CAPACITOR	56pF,50V
	C40	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C41	QCSA1HJ-470	CAPACITOR	47pF,50V
	C42	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C43	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C44	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C45	QCSA1HJ-680	CAPACITOR	68pF,50V
	C46	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C47	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C48	QEK61EM-335	E CAPACITOR	3.3μF,25V
	C49	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C50	QEK61CM-106	E CAPACITOR	10μF,16V
	C51	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C52	QEK61HM-225	E CAPACITOR	2.2μF,50V
	C53	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C54	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C55	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C56	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C57	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C58	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C59	QETC1CM-106	E CAPACITOR	10μF,16V
	L1	PU48530-101K	COIL	100μH
	L2	PU48530-101K	COIL	100μH
	L3	PU48530-101K	COIL	100μH
	L4	PU48530-101K	COIL	100μH
	L5	PU48530-101K	COIL	100μH
	L6	PU48530-101K	COIL	100μH
	L7	PU48530-101K	COIL	100μH
	L8	PU48530-101K	COIL	100μH
	L9	PU59988-180J	COIL	18μH
	L10	PU48530-101K	COIL	100μH
	L11	PU48530-101K	COIL	100μH
	LC1	PU57072	BAND PASS FILTER	
	LC801	PU59885-102	N FILTER	
	LC802	PU59885-102	N FILTER	
	LC803	PU59885-102	N FILTER	
	LC804	PU59885-102	N FILTER	
	LC805	PU59885-102	N FILTER	
	LC806	PU59885-102	N FILTER	
	LC807	PU59885-102	N FILTER	
	LC808	PU59885-102	N FILTER	
	S801	PU58486-1-1	SLIDE SWITCH	
	S802	PU58486-1-1	SLIDE SWITCH	
	K803	PU60281-5	FERRATE BEADS	
	K804	PU60281-5	FERRATE BEADS	
	JA801	PU59592	PERRI. CONNECTOR	
	JA802	PU59592	PERRI. CONNECTOR	
	JA803	PEMC0963	S JACK	
	JA804	PEMC0963	S JACK	
	JA805	PU60664-8	MINI JACK,S5900EG	
	CN1	PU59555-6	CONNECTOR,(1-6) SW/JACK S6900EG	

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
CN801	PEMC0970-213	B TO B CONNECTOR,(1-13) MAIN	
CN802	PEMC0970-214	B TO B CONNECTOR,(1-13) MAIN S5900EG	
	PEMC0970-212	B TO B CONNECTOR,(1-12) MAIN S6900EG	
CN803	PEMC0970-213	B TO B CONNECTOR,(1-13) MAIN	
CN811	PU59555-2	CONNECTOR,(1-2) TUNER	

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TUNER BOARD ASSEMBLY <07>

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA1	PB10773A-01	TU/DEM/P/V BOARD ASSEMBLY	

- TUNER/IF SECTION -

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
△ RF1	PERF0157	RF CONVERTER	
△ TNR1	PERF0123-01-01	TUNER	
△ TNR2	PERF0128	IF UNIT	
Q1	DTC114ES	TRANSISTOR	
Q2	2SB810H,J	TRANSISTOR	
Q3	2SC3068	TRANSISTOR	
Q12	2SK381(C)	FE TRANSISTOR	
Q13	DTC144ES	TRANSISTOR	
Q14	2SC1740S(S)	TRANSISTOR	
Q15	2SA933S(S)	TRANSISTOR	
Q16	2SC1740S(S)	TRANSISTOR	
Q17	DTC144ES	TRANSISTOR	
D1	HZ30-2L	ZENER DIODE	
D2	1SS133	DIODE	
D3	1SS133	DIODE	
D4	1SS133	DIODE	
R1	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R2	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R3	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R20	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R30	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R31	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R32	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R33	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R34	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R35	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R36	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R37	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R38	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R39	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R40	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
C1	QETF1CM-336	E CAPACITOR	33μF,16V
C6	QETF1CM-106	E CAPACITOR	10μF,16V
C7	QETF1HM-106	E CAPACITOR	10μF,50V
C8	QCYA1HJ-102	CAPACITOR	0.001μF,50V
C9	QCYA1HJ-471	CAPACITOR	470pF,50V
C10	QCYA1HJ-471	CAPACITOR	470pF,50V
C13	QCYA1HJ-222	CAPACITOR	0.0022μF,50V
C14	QCYA1EK-223	CAPACITOR	0.022μF,25V
C15	QETF1HM-474	E CAPACITOR	0.47μF,50V
C17	QCYA1HJ-102	CAPACITOR	0.001μF,50V
C18	QCYA1HJ-102	CAPACITOR	0.001μF,50V
L1	PU59152-100J	COIL	10μH
L2	PU59152-100J	COIL	10μH
L3	PU59152-100J	COIL	10μH
S1	PESW0525-Z	TACT SWITCH	
T1	PELN0806	COIL	
ETH1	PQ45208	EARTH PLATE	
J1	PEMC0824	DIN CONNECTOR	
SCW1	SDST2605Z	SCREW	
SCW2	SDSF3010Z	SCREW,X2	
△ TB1	PQ11596	TERMINAL BOARD (2)	
WR1	PW30402-BB20M	COAXIAL CORD,TNR-CONV	
CN1	PEMC0915-014	FFC CONNECTOR,(1-14) MAIN	
CN2	PU60910-4	CONNECTOR,(1-4) SW REG	
CN3	PU59555-6	CONNECTOR,(1-6) MAIN	
CN4	PU59555-5	CONNECTOR,(1-5) MAIN	
CN6	PU59555-2	CONNECTOR,(1-2) MAIN	
CN7	PU59555-2	CONNECTOR,(1-2) TERMINAL	

- DEMOD SECTION -

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
IC208	TDA8415	IC	
	or TDA8416	IC	
IC209	UPC1391H	IC	
Q206	FMG3	TRANSISTOR	
Q208	DTA114TU	TRANSISTOR	
Q209	2SA1532(C)	TRANSISTOR	
Q210	DTC114EU	TRANSISTOR	
Q211	2SD1450S,T	TRANSISTOR	
D201	DAP202U	DIODE	
R255	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R256	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R257	NRSA63J-101N	RESISTOR	100Ω,1/16W
R260	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R261	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R262	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R263	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
R264	QVZ3518-103	V RESISTOR,SEPALATION	
R272	NRSA63J-391N	RESISTOR	390Ω,1/16W
R273	NRSA63J-271N	RESISTOR	270Ω,1/16W
R275	NRSA63J-561N	RESISTOR	560Ω,1/16W
R276	NRSA63J-471N	RESISTOR	470Ω,1/16W
R277	NRSA63J-331N	RESISTOR	330Ω,1/16W
C253	QEKF1HM-225	E CAPACITOR	2.2μF,50V
C254	QEKF1HM-225	E CAPACITOR	2.2μF,50V
C255	QETF1CM-226	E CAPACITOR	22μF,16V
C257	NCF31HZ-473A	CAPACITOR	0.047μF,50V
C258	QETC1CM-226	E CAPACITOR	22μF,16V
C259	QCFA1CZ-224	CAPACITOR	0.22μF,16V
C260	QEKF1HM-225	E CAPACITOR	2.2μF,50V
C261	QEKF1HM-225	E CAPACITOR	2.2μF,50V
C264	QETF1CM-336	E CAPACITOR	33μF,16V
C265	QCYA1HK-473	CAPACITOR	0.047μF,50V
C266	NCT06CH-220A	CAPACITOR	22pF,50V
C267	QCYA1HK-473	CAPACITOR	0.047μF,50V
C268	QCYA1HK-473	CAPACITOR	0.047μF,50V
C269	QCYA1HK-473	CAPACITOR	0.047μF,50V
C272	QETF1CM-226	E CAPACITOR	22μF,16V
C273	QETF1CM-226	E CAPACITOR	22μF,16V
C278	QCYA1HK-222	CAPACITOR	0.0022μF,50V
C295	NCB31HK-221A	CAPACITOR	220pF,50V
C296	NCB31HK-221A	CAPACITOR	220pF,50V
C307	NCF31HZ-473A	CAPACITOR	0.047μF,50V
CF201	PU52775	CERAMIC FILTER	
CF202	PU52775-2	CERAMIC FILTER	
CF203	PEVB0481	C DISCRIMINATER	
△ X202	PEVB0479	CRYSTAL RESONATOR	
K206	PELN0662-Z	FERRATE BEADS	
K207	PELN0662-Z	FERRATE BEADS	
K209	PELN0662-Z	FERRATE BEADS	
K211	PELN0662-Z	FERRATE BEADS	
CL1	PU59311-3	WIRE CLAMP	

- VPS SECTION -

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
IC101	SAA4700	IC	
R101	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R102	QRSA08J-753YN	RESISTOR	75kΩ,1/10W
R103	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
C101	QCFA1HZ-223	CAPACITOR	0.022μF,50V
C102	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C103	QFV11HJ-104	F CAPACITOR	0.1μF,50V
C104	QCYA1HK-102	CAPACITOR	0.001μF,50V
C105	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C106	QFV11HJ-104	F CAPACITOR	0.1μF,50V
C107	QCYA1HJ-471	CAPACITOR	470pF,50V

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AUDIO UNIT BOARD ASSY <09>

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA1	PB10613C	AUDIO UNIT BOARD ASSEMBLY	
△ IC1	JCP0038	IC	
△	or JCP0038-B	IC	
Q1	2SC2412K(R)	TRANSISTOR	
Q2	2SC2412K(R)	TRANSISTOR	
D1	DAN202K	DIODE	
R1	NRSA63J-475N	RESISTOR	4.7MΩ,1/16W
R2	NRSA63J-511N	RESISTOR	510Ω,1/16W
R3	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R4	NRSA63J-513N	RESISTOR	51kΩ,1/16W
R5	NVP1301-473NU	V RESISTOR,L DEVIATION	
R6	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R8	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
R9	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R10	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R11	NVP1301-153NZ	V RESISTOR,L CARRIER	
R12	NRSA63J-105N	RESISTOR	1MΩ,1/16W
R13	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R14	NRSA63J-183N	RESISTOR	18kΩ,1/16W
R16	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R18	NRSA63J-303N	RESISTOR	30kΩ,1/16W
R19	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R20	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R21	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R22	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R23	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R24	NRSA63J-752N	RESISTOR	7.5kΩ,1/16W
R25	NVP1301-153NZ	V RESISTOR,R CARRIER	
R26	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R27	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
R29	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R30	NVP1301-473NU	V RESISTOR,R DEVIATION	
R31	NRSA63J-513N	RESISTOR	51kΩ,1/16W
R32	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R33	NRSA63J-511N	RESISTOR	510Ω,1/16W
R34	NRSA63J-475N	RESISTOR	4.7MΩ,1/16W
R35	NRSA63J-514N	RESISTOR	510kΩ,1/16W
R36	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R38	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R41	NRSA63J-101N	RESISTOR	100Ω,1/16W
R42	NRSA63J-101N	RESISTOR	100Ω,1/16W
R43	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R44	NRSA63J-154N	RESISTOR	150kΩ,1/16W
R45	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R46	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R47	NRSA63J-154N	RESISTOR	150kΩ,1/16W
R48	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R49	NRSA63J-334N	RESISTOR	330kΩ,1/16W
R50	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R51	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R52	NRSA63J-104N	RESISTOR	100kΩ,1/16W
R54	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R55	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R56	NRSA63J-101N	RESISTOR	100Ω,1/16W
R57	NRSA63J-101N	RESISTOR	100Ω,1/16W
C1	NCB31EK-103A	CAPACITOR	0.01μF,25V
C2	QETC1AM-336	E CAPACITOR	33μF,10V
C3	QFLC1HJ-473Z	F CAPACITOR	0.047μF,50V
C4	QETC1HM-225	E CAPACITOR	2.2μF,50V
C5	QFLC1HJ-333Z	F CAPACITOR	0.033μF,50V
C6	QETC1AM-476	E CAPACITOR	47μF,10V
C7	QETC1CM-106	E CAPACITOR	10μF,16V
C8	QFLC1HJ-103Z	F CAPACITOR	0.01μF,50V
C9	QETC0JM-107	E CAPACITOR	100μF,6.3V
C10	NCB31HK-102A	CAPACITOR	0.001μF,50V
C11	QFLC1HJ-104Z	F CAPACITOR	0.1μF,50V
C12	QFLC1HJ-223Z	F CAPACITOR	0.022μF,50V
C13	NCB31HK-821A	CAPACITOR	820pF,50V
C14	QFLC1HJ-392Z	F CAPACITOR	0.0039μF,50V
C15	QFLC1HJ-333Z	F CAPACITOR	0.033μF,50V
C16	QETC1HM-105	E CAPACITOR	1μF,50V
C18	NCB31HK-561A	CAPACITOR	560pF,50V
C19	NCF31CZ-104A	CAPACITOR	0.1μF,16V
C20	NCS31HJ-101A	CAPACITOR	100pF,50V
C21	NCS31HJ-101A	CAPACITOR	100pF,50V
C22	QFLC1HJ-392Z	F CAPACITOR	0.0039μF,50V
C23	NCB31HK-821A	CAPACITOR	820pF,50V
C24	QFLC1HJ-223Z	F CAPACITOR	0.022μF,50V
C25	QFLC1HJ-104Z	F CAPACITOR	0.1μF,50V
C26	NCB31HK-102A	CAPACITOR	0.001μF,50V
C27	QETC0JM-107	E CAPACITOR	100μF,6.3V
C28	QFLC1HJ-103Z	F CAPACITOR	0.01μF,50V
C29	QETC1CM-106	E CAPACITOR	10μF,16V
C30	QETC1AM-476	E CAPACITOR	47μF,10V
C31	QFLC1HJ-333Z	F CAPACITOR	0.033μF,50V
C32	QETC1HM-225	E CAPACITOR	2.2μF,50V
C33	QFLC1HJ-473Z	F CAPACITOR	0.047μF,50V
C34	QETC1AM-336	E CAPACITOR	33μF,10V
C35	NCB31EK-103A	CAPACITOR	0.01μF,25V
C36	QETC1CM-106	E CAPACITOR	10μF,16V
C37	QETC1CM-106	E CAPACITOR	10μF,16V
C38	QETC1CM-226	E CAPACITOR	22μF,16V
C39	QETC1CM-106	E CAPACITOR	10μF,16V
C40	QETC1CM-106	E CAPACITOR	10μF,16V
C41	QETC0JM-107	E CAPACITOR	100μF,6.3V
C42	QETC0JM-107	E CAPACITOR	100μF,6.3V

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	C43	QETC1AM-107	E CAPACITOR	100μF,10V
	C44	QETC1CM-476	E CAPACITOR	47μF,16V
	C45	QETC1AM-476	E CAPACITOR	47μF,10V
	C46	QETC1CM-106	E CAPACITOR	10μF,16V
	C47	NCB31EK-103A	CAPACITOR	0.01μF,25V
	C48	QETC1CM-106	E CAPACITOR	10μF,16V
	C49	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C50	NCF31CZ-104A	CAPACITOR	0.1μF,16V
	C51	QFLC1HJ-822Z	F CAPACITOR	0.0082μF,50V
	C52	QFLC1HJ-822Z	F CAPACITOR	0.0082μF,50V
	C53	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C54	QETC1CM-106	E CAPACITOR	10μF,16V
	C55	NCF31CZ-104A	CAPACITOR	0.1μF,16V
	C56	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C57	QETC1CM-106	E CAPACITOR	10μF,16V
	C58	NCF31CZ-104A	CAPACITOR	0.1μF,16V
	C59	QETC1HM-105	E CAPACITOR	1μF,50V
	C60	NCF31CZ-104A	CAPACITOR	0.1μF,16V
	C61	NCF31CZ-104A	CAPACITOR	0.1μF,16V
	L1	PELN0530-101JZ	COIL	100μH
	L2	PELN0530-101JZ	COIL	100μH
	L3	PELN0530-101JZ	COIL	100μH
	BPF1	PU60610	BPF(1.4MHZ)	
	BPF2	PU60611	BPF(1.8MHZ)	
	JP1	PEMC0919-126	PIN HEADER	
	JP2	PEMC0919-126	PIN HEADER	

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A/C HEAD BOARD <12>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWB1	PB40046-01-02	AUDIO CONTROL HEAD BOARD	
	CN201	PU59555-104	CONNECTOR	
	CN202	PU59555-103	CONNECTOR	

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DISPLAY BOARD ASSEMBLY <28>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB10826A1-01	DISPLAY BOARD ASSY,S5900EG	
		PB10826B1-01	DISPLAY BOARD ASSY,S6900EG	
	IC1	UPD16311GC(K)	IC	
		or UPD16311GC(E)	IC	
	IC2	GP1U801X	IR DETECT UNIT	
		or GP1U541X	IR DETECT UNIT	
	D1	RD4.7ES-T1B2	ZENER DIODE	
	D2	1SS132Y	DIODE	
	D3	1SS132Y	DIODE	
	D4	1SS132Y	DIODE	
	D5	1SS132Y	DIODE	
	D6	1SS132Y	DIODE	
	D7	1SS132Y	DIODE	
	D8	SLH-34DC3F	LE DIODE,HYPER BASS	
	D9	SLH-34MC3F	LE DIODE,S-VHS	
	D10	SLH-34MC3F	LE DIODE,16:9 REC	
	D11	1SS132Y	DIODE	
	D20	1SS132Y	DIODE	
	D21	1SS132Y	DIODE	
	D25	1SS132Y	DIODE	
	R1	QRD161J-103	RESISTOR	10kΩ,1/6W
	R2	QRD161J-333	RESISTOR	33kΩ,1/6W
	R3	QRD161J-333	RESISTOR	33kΩ,1/6W
	R4	QRD161J-333	RESISTOR	33kΩ,1/6W
	R5	QRD161J-333	RESISTOR	33kΩ,1/6W
	R6	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R7	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R8	QRD161J-102	RESISTOR	1kΩ,1/6W
	R9	QRD161J-151	RESISTOR	150Ω,1/6W
	R10	QRD161J-103	RESISTOR	10kΩ,1/6W
	R11	QRD161J-333	RESISTOR	33kΩ,1/6W
	R12	QRD161J-103	RESISTOR	10kΩ,1/6W
	R13	QRD161J-331	RESISTOR	330Ω,1/6W
	R14	QRD161J-151	RESISTOR,S6900EG	150Ω,1/6W
	R15	QRD161J-105	RESISTOR,S6900EG	1MΩ,1/6W
	R18	QRD161J-331	RESISTOR	330Ω,1/6W
	R19	QRD161J-331	RESISTOR	330Ω,1/6W
	RA1	QRB045J-333XM	RESISTOR ARRAY	33kΩ,1/8W
	C1	QEK60JM-107	E CAPACITOR	100μF,6.3V
	C2	QEK61HM-106	E CAPACITOR	10μF,50V
	C3	QCFB1HZ-473	CAPACITOR	0.047μF,50V
	C4	QCFB1HZ-473	CAPACITOR	0.047μF,50V
	C5	QCSB1HJ-330	CAPACITOR	33pF,50V
	C7	QCVB1CM-103	CAPACITOR	0.01μF,16V
	C8	QCSB1HJ-330	CAPACITOR	33pF,50V
	C9	QCFB1HZ-104	CAPACITOR	0.1μF,50V
	C10	QEK60JM-476	E CAPACITOR	47μF,6.3V
	C11	QCVB1CM-103	CAPACITOR,S6900EG	0.01μF,16V
	C12	QEK61AM-227	E CAPACITOR	220μF,10V
	L1	PU48530-101J	COIL	100μH
	S1	PESW0525-02Z	TACT SWITCH,CH+	
	S2	PESW0525-02Z	TACT SWITCH,REC/ITR	
	S3	PESW0525-02Z	TACT SWITCH,PAUSE	
	S4	PESW0525-02Z	TACT SWITCH,CH−	
	S5	PESW0525-02Z	TACT SWITCH,PLAY	
	S6	PESW0525-02Z	TACT SWITCH,STOP/EJECT	
	S9	PESW0525-02Z	TACT SWITCH,SP/LP	
	S18	PESW0525-02Z	TACT SWITCH,INSERT	
	S19	PESW0525-02Z	TACT SWITCH,MIX	
	S20	PESW0525-02Z	TACT SWITCH,HYPER BASS	
	S30	PESW0525-02Z	TACT SWITCH,A.DUB	
	S32	PESW0525-02Z	TACT SWITCH,TV/VIDEO	
	S33	PESW0525-02Z	TACT SWITCH,S/AV	
	S34	PESW0525-02Z	TACT SWITCH,SIMUL	
	S35	PESW0525-02Z	TACT SWITCH,S-VHS	
	S53	PESW0551	SLIDE SWITCH,EDIT	
	S54	PESW0551	SLIDE SWITCH,16:9 REC	
	FDP1	PEDP0106	FLUORESCENT DISPLAY PANEL	
	CL1	PU59311-2	WIRE CLAMP,X2 J1 J2	
	HD1	PQM30038-2-2	LED HOLDER,X3 D8 D9 D10	
	HD2	PQ31334-1-2	D.HOLDER (R)	
	HD3	PQ31333-1-2	D.HOLDER (L)	
	J1	PW30219-0662614	WIRE	
	J2	PW30219-0672414	WIRE,S5900EG	
		PW30219-0772414	WIRE,S6900EG	
	CN1	PEMC0915-108	FFC CONNECTOR,(1-8) MAIN	
	CN2	PEMC0889-011	B TO B CONN,(1-9) SW/JACK	
	CN3	PU60910-104	WIRE TRAP,(1-4) SW REG	

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SWITCH/JACK BOARD ASSEMBLY <36>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA2	PB10826A2-01	SWITCH/JACK BOARD ASSY,S5900EG	
		PB10826B2-01	SWITCH/JACK BOARD ASSY,S6900EG	
	Q101	DTC114ES	TRANSISTOR,S6900EG	
	D101	SLH-34VC3F	LE DIODE,POWER	
	R101	QRD161J-331	RESISTOR	330Ω,1/6W
	R102	QRD161J-103	RESISTOR,S6900EG	10kΩ,1/6W
	LC101	PU59885-102	N FILTER,S6900EG	
	LC102	PU59885-102	N FILTER,S6900EG	
	S10	PESW0525-02Z	TACT SWITCH,CANCEL	
	S11	PESW0525-02Z	TACT SWITCH,TIMER	
	S12	PESW0525-02Z	TACT SWITCH,POWER	
	S13	PESW0525-02Z	TACT SWITCH,START+	
	S14	PESW0525-02Z	TACT SWITCH,START−	
	S15	PESW0525-02Z	TACT SWITCH,STOP+	
	S16	PESW0525-02Z	TACT SWITCH,STOP−	
	HD1	PQ43214	LED HOLDER,D101	
	JA101	PU60659	MINI JACK,S6900EG	
	JA102	PU60664-3	MINI JACK,S6900EG	
	JA103	PEMC0937	MINI DIN CONNECTOR,S6900EG	
	JA104	PEMC1008	PIN JACK(SW),S6900EG	
	CN102	PEMC0915-104	FFC CONNECTOR,(1-4) MAIN	
	CN103	PU59555-3	CONNECTOR,(1-3) MAIN,S6900EG	
	CN104	PU59555-6	CONNECTOR,(1-6) TERMINAL,S6900EG	
	CN105	PEMC0825-011	B TO B CONNECTOR,(1-9) DISPLA	
	CN106	PU59555-3	CONNECTOR,(1-3) MAIN S6900EG	

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PRE/REC BOARD ASSEMBLY <43>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB20648A-01	PRE/REC BOARD ASSEMBLY	
	BKT1	PQ21507-1-1	SHIELD BRACKET	
	SLD1	PQ44851	SHIELD CASE	
	SLD2	PQ44852	SHIELD COVER	
	CN1	PEMC0917-116	FFC CONNECTOR,(1-16) MAIN	
	CN2	PU59974-13	CONNECTOR,(1-13) UPPER DRUM	
	CN3	PU59555-103	CONNECTOR,(1-3) SW REG	
	CN201	PEMC0917-109	FFC CONNECTOR,(1-9) MAIN	
	TP6,253	PEMC1064-102	PIN HEADER,PB FM V,A	

– VIDEO P/R SECTION –

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	IC1	JCP0047-WE	IC	
	Q2	2SC4081(QRS)	TRANSISTOR	
	Q3	2SC4081(QRS)	TRANSISTOR	
	Q4	DTA144EU	TRANSISTOR	
	Q5	2SC4081(QRS)	TRANSISTOR	
	Q6	2SA1576(QR)	TRANSISTOR	
	Q7	2SA1576(QR)	TRANSISTOR	
	Q8	2SC4081(QRS)	TRANSISTOR	
	Q9	2SC4081(QRS)	TRANSISTOR	
	Q10	2SA1576(QR)	TRANSISTOR	
	Q11	2SC4081(QRS)	TRANSISTOR	
	Q12	2SC4081(QRS)	TRANSISTOR	
	D1	DAN202U	DIODE	
	D4	DAN202U	DIODE	
	R1	QRSA08J-160YN	RESISTOR	16Ω,1/10W
	R2	QRSA08J-270YN	RESISTOR	27Ω,1/10W
	R3	QRSA08J-510YN	RESISTOR	51Ω,1/10W
	R4	QRSA08J-470YN	RESISTOR	47Ω,1/10W
	R7	QRSA08J-271YN	RESISTOR	270Ω,1/10W
	R8	QRSA08J-271YN	RESISTOR	270Ω,1/10W
	R9	NRVA62D-203N	RESISTOR	20kΩ,1/16W
	R10	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R14	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R15	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R16	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R17	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R18	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R19	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R20	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R65	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R66	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R67	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R68	QRSA08J-162YN	RESISTOR	1.6kΩ,1/10W
	R69	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R70	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R71	NRVA62D-123N	RESISTOR	12kΩ,1/16W
	R72	NRVA62D-392N	RESISTOR	3.9kΩ,1/16W
	R73	QRSA08J-301YN	RESISTOR	300Ω,1/10W
	R74	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R75	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R76	NVP1311-153N	V RESISTOR,V REC FM	
	R77	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R78	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R79	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R80	QRSA08J-151YN	RESISTOR	150Ω,1/10W
	R82	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R83	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R84	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	C1	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C2	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C3	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C4	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C8	QCTA1CH-8R0	CAPACITOR	8pF,16V
	C9	QCTA1CH-180	CAPACITOR	18pF,16V
	C10	QCTA1CH-130	CAPACITOR	13pF,16V
	C13	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C14	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C15	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C16	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C19	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C20	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C21	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C22	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C23	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C24	QCFA1HZ-223	CAPACITOR	0.022μF,50V
	C26	QCFA1CZ-474	CAPACITOR	0.47μF,16V
	C28	QCFA1CZ-105	CAPACITOR	1μF,16V
	C29	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C30	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C33	QCSA1HJ-222	CAPACITOR	0.0022μF,50V
	C34	QCSA1HJ-222	CAPACITOR	0.0022μF,50V
	C35	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C37	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C38	QCSA1HJ-331	CAPACITOR	330pF,50V
	C39	QCSA1HJ-121	CAPACITOR	120pF,50V

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	C41	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C43	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C44	QCTA1CH-100	CAPACITOR	10pF,16V
	C45	QCTA1CH-100	CAPACITOR	10pF,16V
	C62	QCSA1HJ-121	CAPACITOR	120pF,50V
	C63	QCFA1HZ-104	CAPACITOR	0.1μF,50V
	C64	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C65	QCSA1HJ-271	CAPACITOR	270pF,50V
	C66	QCSA1HJ-151	CAPACITOR	150pF,50V
	C67	QCSA1HJ-560	CAPACITOR	56pF,50V
	C70	QCFA1HZ-223	CAPACITOR	0.022μF,50V
	C75	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C79	QCSA1HJ-330	CAPACITOR	33pF,50V
	C82	QCSA1HJ-390	CAPACITOR	39pF,50V
	C83	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C84	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	L1	PU54223-101K	COIL	100μH
	L2	PU48530-101K	COIL	100μH
	L3	PU54223-101K	COIL	100μH
	L4	PU58201-181J	COIL	180μH
	L5	PU58201-330J	COIL	33μH
	L11	PU58201-330J	COIL	33μH
	L12	PU58201-101J	COIL	100μH
	L13	PU58201-820J	COIL	82μH

– FMA P/R SECTION –

	IC201	AN3380NK	IC	
	Q201	DTC124TU	TRANSISTOR	
	Q202	DTC124TU	TRANSISTOR	
	Q203	DTC114WU	TRANSISTOR	
	Q204	2SC4081(QRS)	TRANSISTOR	
	Q205	DTA114EU	TRANSISTOR	
	Q206	DTC114WU	TRANSISTOR	
	Q210	DTC144WU	TRANSISTOR	
	Q211	DTA114EU	TRANSISTOR	
	Q212	DTC124TU	TRANSISTOR	
	D201	DAN202U	DIODE	
	D203	DAN202U	DIODE	
	D204	DAN202U	DIODE	
	R201	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R202	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R203	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R204	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
	R205	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R206	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R207	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R208	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R209	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R210	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R211	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R212	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R214	QRSA08J-560YN	RESISTOR	56Ω,1/10W
	R215	QRSA08J-560YN	RESISTOR	56Ω,1/10W
	R216	QVZ3521-331Z	V RESISTOR,S-REC BIAS	
	R217	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R218	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R223	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R224	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	C201	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C202	QCSA1HJ-391	CAPACITOR	390pF,50V
	C203	QCSA1HJ-561	CAPACITOR	560pF,50V
	C204	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C205	QCSA1HJ-561	CAPACITOR	560pF,50V
	C206	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C207	QCFA1CZ-224	CAPACITOR	0.22μF,16V
	C208	QCSA1HJ-391	CAPACITOR	390pF,50V
	C209	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C210	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C211	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C213	QCSA1HJ-331	CAPACITOR	330pF,50V
	C214	QCSA1HJ-330	CAPACITOR	33pF,50V
	C215	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C216	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C217	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C218	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C220	QEKF1AM-476	E CAPACITOR	47μF,10V
	C221	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C224	QCFA1CZ-224	CAPACITOR	0.22μF,16V
	C225	QCSA1HK-101	CAPACITOR	100pF,50V
	L201	PELN0530-101JZ	COIL	100μH
	L202	PU59988-221J	COIL	220μH

– FIYING ERASE SECTION –

	Q301	2SA933S(QRS)	TRANSISTOR	
	Q302	2SC1741S(QR)	TRANSISTOR	
	Q303	2SA933S(Q)	TRANSISTOR	
	Q304	2SD639R	TRANSISTOR	
	Q305	2SD639R	TRANSISTOR	
	D301	UZ8.2BSC	ZENER DIODE	
	D302	DAN202U	DIODE	
	R301	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R302	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R303	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R304	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R305	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R306	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R307	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R308	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R309	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R310	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	C301	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C302	QCC11EJ-123	CAPACITOR	0.012μF,25V
	C303	QCSA1HJ-560	CAPACITOR	56pF,50V
	C304	QCSA1HJ-820	CAPACITOR	82pF,50V
	C305	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C306	QCSA1HJ-820	CAPACITOR	82pF,50V
	C308	QCT05UJ-181	CAPACITOR	180pF
	C309	QCT25UJ-330	CAPACITOR	33pF
	L301	PU48530-560J	COIL	56μH
	L302	PU48530-3R3K	COIL	3.3μH
	L303	PU48530-3R3K	COIL	3.3μH
	L304	PU59152-101J	COIL	100μH
△	T301	PU56175	S.TRANS	

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DECK TERMINAL BOARD ASSEMBLY <51>

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PB10715A-05	DECK TERMINAL BOARD ASSEMBLY	
	Q1,Q2	PU61321-1-1	TAPE SENSOR,X2	
	S3,S5	PU61320	SLIDE CASSETTE SWITCH,X2	
	IC1	M66007P	IC	
	D1	GL381J	LE DIODE	
	D2	RD6.2ES-T1B1	ZENER DIODE	
	D3	1SS133	DIODE	
	D4	1SS133	DIODE	
	R1	QRD161J-102	RESISTOR	1kΩ,1/6W
	R2	QRD161J-102	RESISTOR	1kΩ,1/6W
	R3	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R4	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R5	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R6	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R7	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R8	QRD161J-103	RESISTOR	10kΩ,1/6W
	R9	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R10	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R11	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R12	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R13	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R16	QRD161J-221	RESISTOR	220Ω,1/6W
	R17	QRD161J-820	RESISTOR	82Ω,1/6W
	R18	QRD161J-221	RESISTOR	220Ω,1/6W
	R20	QRD161J-102	RESISTOR	1kΩ,1/6W
	R21	QRD161J-223	RESISTOR	22kΩ,1/6W
	R22	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R23	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R24	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R25	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R26	QRD161J-563	RESISTOR	56kΩ,1/6W
	R27	QRD161J-103	RESISTOR	10kΩ,1/6W
	R28	QRD161J-103	RESISTOR	10kΩ,1/6W
	R29	QRD161J-103	RESISTOR	10kΩ,1/6W
	R30	QRD161J-103	RESISTOR	10kΩ,1/6W
	C3	QCBB1HJ-101	CAPACITOR	100pF,50V
	C4	QCVB1CM-103	CAPACITOR	0.01μF,16V
	S1	PU61319	REC SAFETY SWITCH	
	PS1	PU61318	REEL SENSOR	
	PS2	PU61318	REEL SENSOR	
	TH1,TH3	NTH5D473KB	THERMISTOR, X2	
	WR1	PW30218-04416	WIRE	
	CN1	PEMC0918-016	FFC CONNECTOR	
	CN2	PU60642	7PIN CONNECTOR	
	CN6	PU59555-4	CONNECTOR	

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LOADING MDA BOARD ASSEMBLY <55>

	PWBA	PB10715A2	LOADING MDA BOARD ASSY	
△	IC101	BA6418N	IC	
△		or XRA6418N	IC	
	C101	QETC1CM-476	E CAPACITOR	47μF,16V
	CN101	PU59555-104	CONNECTOR	

#△	REF No.	PART No.	PART NAME, DESCRIPTION	

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Y/C SEPA BOARD ASSEMBLY <89>

	PWBA1	PB20649A-01	Y/C SEPA BOARD ASSEMBLY	
	IC1	NJM2240M	IC	
	IC2	JCP0042	IC	
	Q1	2SC4081(QRS)	TRANSISTOR	
	Q2	2SA1576(QRS)	TRANSISTOR	
	Q3	2SC4081(QRS)	TRANSISTOR	
	Q4	2SA1576(QRS)	TRANSISTOR	
	Q5	2SC4081(QRS)	TRANSISTOR	
	Q6	2SA1576(QRS)	TRANSISTOR	
	Q7	2SC4081(QRS)	TRANSISTOR	
	Q8	2SC4081(QRS)	TRANSISTOR	
	Q9	2SC4081(QRS)	TRANSISTOR	
	Q10	2SC3932(ST)	TRANSISTOR	
	Q11	2SC4081(QRS)	TRANSISTOR	
	Q12	2SC4081(QRS)	TRANSISTOR	
	Q13	2SC4081(QRS)	TRANSISTOR	
	Q14	2SC3932(ST)	TRANSISTOR	
	Q15	2SA1576(QRS)	TRANSISTOR	
	D1	DAP202U	DIODE	
	R1	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R2	NRSA63J-471N	RESISTOR	470Ω,1/16W
	R3	NRSA63J-361N	RESISTOR	360Ω,1/16W
	R4	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R5	NRSA63J-271N	RESISTOR	270Ω,1/16W
	R6	NRSA63J-271N	RESISTOR	270Ω,1/16W
	R7	NRSA63J-271N	RESISTOR	270Ω,1/16W
	R8	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R9	NRSA63J-473N	RESISTOR	47kΩ,1/16W
	R10	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R11	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R12	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R13	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
	R14	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R15	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R16	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R17	NRSA63J-681N	RESISTOR	680Ω,1/16W
	R18	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R19	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R21	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R22	NRSA63J-681N	RESISTOR	680Ω,1/16W
	R23	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R24	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R25	NRSA63J-132N	RESISTOR	1.3kΩ,1/16W
	R26	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
	R27	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R28	NRSA63J-361N	RESISTOR	360Ω,1/16W
	R29	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R30	NRSA63J-223N	RESISTOR	22kΩ,1/16W
	R31	NRSA63J-223N	RESISTOR	22kΩ,1/16W
	R32	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R33	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R34	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R35	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
	R36	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R37	NRSA63J-361N	RESISTOR	360Ω,1/16W
	R38	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R39	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R40	NRSA63J-102N	RESISTOR	1kΩ,1/16W

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R41	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R42	NRSA63J-331N	RESISTOR	330Ω,1/16W
R43	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R44	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R45	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R46	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R47	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R48	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R49	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R50	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R51	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R52	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R54	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R60	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R63	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
C1	NCS31HJ-8R0A	CAPACITOR	8pF,50V
C2	NCB31HK-103A	CAPACITOR	0.01μF,50V
C3	QEK60JM-107	E CAPACITOR	100μF,6.3V
C4	NCB31HK-103A	CAPACITOR	0.01μF,50V
C5	QEK61EM-475	E CAPACITOR	4.7μF,25V
C6	NCB31HK-102A	CAPACITOR	0.001μF,50V
C7	NCB31HK-103A	CAPACITOR	0.01μF,50V
C8	NCT06CH-5R0A	CAPACITOR	5pF,50V
C9	NCB31HK-103A	CAPACITOR	0.01μF,50V
C10	NCB31HK-103A	CAPACITOR	0.01μF,50V
C11	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C12	QEK60JM-337	E CAPACITOR	330μF,6.3V
C13	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C14	QEK60JM-107	E CAPACITOR	100μF,6.3V
C15	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C16	QEK60JM-107	E CAPACITOR	100μF,6.3V
C17	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C18	QEK60JM-107	E CAPACITOR	100μF,6.3V
C19	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C20	QEK60JM-107	E CAPACITOR	100μF,6.3V
C21	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C22	QEK60JM-337	E CAPACITOR	330μF,6.3V
C24	QEK60JM-476	E CAPACITOR	47μF,6.3V
C25	NCB31HK-103A	CAPACITOR	0.01μF,50V
C26	QEK61HM-105	E CAPACITOR	1μF,50V
C27	NCB31HK-103A	CAPACITOR	0.01μF,50V
C28	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C29	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C30	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C31	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C32	QEK60JM-476	E CAPACITOR	47μF,6.3V
C33	NCB31HK-103A	CAPACITOR	0.01μF,50V
C34	NCB31HK-103A	CAPACITOR	0.01μF,50V
C35	QEK60JM-476	E CAPACITOR	47μF,6.3V
C36	NCB31HK-103A	CAPACITOR	0.01μF,50V
C37	QEK61CM-106	E CAPACITOR	10μF,16V
C38	QEK60JM-476	E CAPACITOR	47μF,6.3V
C39	NCB31HK-103A	CAPACITOR	0.01μF,50V
C40	NCB31HK-103A	CAPACITOR	0.01μF,50V
C41	NCB31HK-103A	CAPACITOR	0.01μF,50V
C42	NCB31HK-103A	CAPACITOR	0.01μF,50V
C43	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C44	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C45	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C46	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C47	NCB31HK-103A	CAPACITOR	0.01μF,50V
C48	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C56	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C64	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C65	NCS31HJ-470A	CAPACITOR	47pF,50V
C66	NCS31HJ-470A	CAPACITOR	47pF,50V
C67	NCS31HJ-470A	CAPACITOR	47pF,50V
C68	NCS31HJ-470A	CAPACITOR	47pF,50V
C69	NCS31HJ-470A	CAPACITOR	47pF,50V
C70	NCS31HJ-470A	CAPACITOR	47pF,50V
C71	NCS31HJ-470A	CAPACITOR	47pF,50V
C72	NCS31HJ-470A	CAPACITOR	47pF,50V
C73	NCS31HJ-470A	CAPACITOR	47pF,50V
C74	NCS31HJ-470A	CAPACITOR	47pF,50V
C75	NCS31HJ-470A	CAPACITOR	47pF,50V
C76	NCS31HJ-470A	CAPACITOR	47pF,50V
C77	NCS31HJ-470A	CAPACITOR	47pF,50V
C78	NCS31HJ-470A	CAPACITOR	47pF,50V
C79	NCS31HJ-470A	CAPACITOR	47pF,50V
C80	NCS31HJ-470A	CAPACITOR	47pF,50V
C82	NCB31HK-103A	CAPACITOR	0.01μF,50V
C83	QEK60JM-476	E CAPACITOR	47μF,6.3V
C84	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C89	QEK61CM-106	E CAPACITOR	10μF,16V
C91	QEK61HM-474	E CAPACITOR	0.47μF,50V
C92	QEK61HM-474	E CAPACITOR	0.47μF,50V
L1	PU58201-100J	COIL	10μH
L2	PU48530-101K	COIL	100μH
L3	PU59153-101K	COIL	100μH
L4	PU59153-101K	COIL	100μH
L5	PU48530-101K	COIL	100μH
L6	PU48530-101K	COIL	100μH
L7	PU48530-101K	COIL	100μH
L8	PU59153-101K	COIL	100μH
L9	PU48530-101K	COIL	100μH
L10	PU48530-101K	COIL	100μH
LPF1	PELN0922-S	LOW PASS FILTER	
LPF2	PELN0922-S	LOW PASS FILTER	
LPF3	PELN0922-S	LOW PASS FILTER	
LPF4	PELN0922-S	LOW PASS FILTER	
LPF5	PELN0922-S	LOW PASS FILTER	
LC1	PU59736-102	N FILTER	
LC2	PU59736-331	N FILTER	
SLD1	PQ34851-1-1	SHIELD FRAME	
SLD2	PQ34852-1-2	SHIELD COVER,X2	
CN1	PEMC0757-113	HOUSING,(1-13) MAIN	
CN2	PEMC0757-112	HOUSING,(1-30) MAIN	

SECTION 6
TECHNICAL INFORMATIONS

6.1 SYSCON CIRCUIT

6.1.1 Syscon CPU pin function (IC601) 1/2

PIN NO.	LABEL	IN/OUT	NOTE
1	S. CURVE	IN	TUNING CHECK
2	D. V. DET	IN	DRUM DRIVE VOLTAGE DETECT
3	WIDE DET	IN	WIDE-SCREEN DETECT
4	AVGFM	IN	AUTO TRACKING DATA(AVERAGE VOLTAGE OF PB FM LEVEL) INPUT
5	AVSS	-	GND
6	TEST	-	GND
7	X2	-	MAIN SYSTEM CLOCK(10MHz)
8	X1	-	MAIN SYSTEM CLOCK(10MHz)
9	VSS	-	GND
10	OSC1	IN	SUB SYSTEM CLOCK
11	OSC2	OUT	SUB SYSTEM CLOCK
12	RESET	IN	RESET AT CONNECT VCR TO AC
13	(NMI)	-	NC
14	S. V. CS	OUT	Y/C SEPARATE CHIP SELECT
15	S. ID IN	IN	SCRAMBLE DETECT
16	P. DOWN	IN	POWER DOWN DETECT(POWER DOWN:H → L)
17	SYNC DET	IN	SYNC DETECT (NO SYNC:H)
18	LOCK DET	IN	TUNING LOCK CHECK
19	MCE	OUT	MEMORY IC CHIP ENABLE
20	EE(L)	OUT	EE MODE:L
21	R. PAUSE	IN	REMOTE PAUSE CONTROL(PAUSE ON:L)
22	TUFG	IN	TAKE-UP REEL ROTATION DET/TAPE REMAIN
23	P CTL	OUT	POWER CONTROL(POWER ON:H)
24	SUP FG	IN	SUPPLY REEL ROTATION DET/TAPE REMAIN
25	P MUTE(L)	OUT	PICUTURE MUTE CONTROL(MUTE ON:H)
26	HRECST(L)	OUT	HiFi REC START:L
27	FEHCTL	OUT	FLYING ERASE HEAD CONTROL(FE ON:H)
28	A MUTE(L)	OUT	AUDIO MUTE CONTROL(MUTE ON:L)
29	AI DATA	OUT	AUDIO CONTROL DATA OUTPUT
30	AI CLK	OUT	AUDIO DATA TRANSFER CLOCK
31	H SEL	OUT	HEAD SELECT CONTROL(SP:L/LP:M/EP:H)
32	A/M/S	OUT	PRE/REC CIRCUIT CONTROL(AUTO:M/MANUAL:H/S&S:L)
33	V. REC(H)	OUT	VIDEO REC MODE:H
34	REC ST(H)	OUT	REC START:H
35	PLL DATA	OUT	TUNING CONTROL SERIAL DATA OUTPUT
36	S. CLK	OUT	DATA TRANSFER CLOCK
37	SERVO(L)	OUT	CAPSTAN MOTOR CONTROL(SERVO:L/MECHACON:H)
38	PAUSE(L)	OUT	CAPSTAN MOTOR CONTROL(PAUSE:L)
39	MECHA DATA	IN/OUT	MECHANISM MODE CONTROL DATA INPUT
40	MECHA CLK	OUT	MECHANISM MODE DATA TRANSFER CLOCK

Table 6-1-1-A SYSCON CPU pin function (1/2)

6.1.2 Syscon CPU pin function (IC601) 2/2

PIN NO.	LABEL	IN/OUT	NOTE
41	JSA	IN	JOG DIAL PULSE INPUT
42	JSB	IN	JOG DIAL PULSE INPUT
43	STL(L)	IN	SHUTTLE SWITCH
44	CTL CLOCK 2	IN	INDEX CONTROL
45	VPCTL	OUT	V. PULSE ADDITION TIMING CONTROL
46	CAP REV	OUT	CAPSTAN MOTOR CONTROL(FWD:H/REV:L)
47	WIDE(H)	IN	WIDE-SCREEN MODE:H
48	DETS	IN	S-VHS PB:H/VHS PB:L
49	EXP DATA	OUT	ABIT EXP DATA for CH PLS CONTROL
50	REMOTE	IN	REMOTE CONTROL DATA INPUT
51	IIC CLK	OUT	NICAM DATA TRANSFER CLOCK
52	CTL C/D	IN	CTL PULSE INPUT(MODE DETECT/BLANK PORTION DET)
53	IIC DATA	IN/OUT	NICAM CTL DATA OUTPUT
54	AV2 SEP(L)	OUT	AV2 INPUT SELECT:L
55	LCM1	OUT	LOADING MOTOR DRIVE(1)
56	LCM2	OUT	LOADING MOTOR DRIVE(2)
57	S-OUT	OUT	ON SCREEN CONTROL DATA
58	S-IN	IN	ON SCREEN /FDP CONTROL DATA
59	S-CLK	OUT	DATA TRANSFER CLOCK
60	SERVO DATA	OUT	SERVO IC CONTROL DATA
61	M. DATA	IN/OUT	MEMORY IC DATA
62	SERVO CLK	OUT	DATA TRANSFER CLOCK
63	VCC	-	SYSTEM POWER
64	STB	OUT	CLOCK OUTPUT PERMISSION
65	TU CTL(H)	OUT	TUNER MODE:H
66	ND	IN	NORMAL AUDIO DETECT(NORMAL AUDIO:L)
67	CTL CLOCK	IN	INDEX CONTROL
68	V UP	OUT	CAPSTAN MOTOR DRIVE VOLTAGE SELECT(M17V:H)
69	CAP FG	IN	TAPE SPEED DETECT/BACK SPACE COUNT
70	DUTY I/O	IN/OUT	IN/OUT INDEX DATA CONTROL
71	D. FF	IN	DRUM ROTATION DETECT/REC TIMING CONTROL
72	AVCC	-	SYSTEM POWER(for ANALOG)
73	SECAM(L)	IN	SWCAM MODE:L
74	SPEED CTL V	OUT	TAPE SPEED CTL VOLTAGE OUTPUT
75	DRUM V	OUT	DRUM MOTOR CONTROL
76	CAP V	OUT	CAPSTAN MOTOR CONTROL
77	PROTECT	IN	POWER PROTECT DETECT(POWER OFF:L)
78	A. LEVEL L	IN	AUDIO INDICATOR LEVEL INPUT(Lch)
79	A. LEVEL R	IN	AUDIO INDICATOR LEVEL INPUT(Rch)
80	THERM	IN	THERMIC CORRECTION(SLOW CAPSTAN BRAKE CTL)

Table 6-1-1-B SYSCON CPU pin function (2/2)